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THE LEAGUE'S BUSINESS

Annual Meeting Announcement.—Some of the speakers who have accepted places on the program of the thirty-first annual meeting of the League at Pittsburgh, November 17 to 19, and their topics can now be announced.

Walter Lippman—Public Opinion, What It is and How It Works
Thomas H. Reed—The Government of Metropolitan Regions—At Home and Abroad
Lawson Purdy—Financing Improvements in Metropolitan Regions
Lent D. Upson—How Bureaus of Research Influence Public Opinion
Harland Bartholomew—Getting Results in City Planning and Zoning

The Civic Club of Allegheny County, our hosts during the convention, anticipate unusual local interest in the above addresses since they relate to matters now uppermost in the minds of many Pittsburghers.

W. J. Millard, field representative of the National Municipal League and the Proportional Representation League, is spending the summer lecturing on the Swarthmore Chautauqua Circuit. His subject is effective voting and effective government and his address covers the city manager plan, proportional representation and county government reform. The fact that Chautauqua audiences can be interested in the summer months in subjects such as these is a tribute to Mr. Millard and an indication of a growing appreciation of the desirability of good government. Our readers will be surprised to learn that during the first week of Mr. Millard's engagement his reference to county government as headless and ramshackle was loudly applauded three times.

City Manager Government Defeated in Yonkers.—At an election strategically called for the day preceding Memorial Day, a proposal to adopt city manager government in Yonkers, New York, was defeated by 3,600 votes in a total poll of 15,000. The National Municipal League had actively assisted in the campaign, a number of addresses being made by Richard S. Childs, vice president, Col. Henry M. Waite, chairman of the executive committee, and H. W. Dodds, secretary. Fifteen thousand copies of our pamphlet, The Story of the City Manager Plan, were purchased by the campaign committee. Although the vote was negative, the criticisms directed at the municipal administration have already had a salutary influence.

Mayor Samuel A. Carlson of Jamestown, N. Y., an old member of the League and an advocate of the city manager form of government, has been honored by the New York State Conference of Mayors by being made a life member of its advisory council.

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COMMENT

Mayor Jackson of Baltimore has announced a plan for the abolition of all railroad grade crossings in the city before the end of his administration in May, 1927.

*

The League of Texas Municipalities has petitioned the legislature to submit a constitutional amendment clarifying the home rule situation and giving to cities undoubted home rule powers.

*

Police Commissioner Enright says there are too many taxicabs in New York city, probably more than are needed to meet public convenience. He advocates ordinances controlling the number of licenses to be issued in accordance with the capacity of the city streets.

*

What Commissioner Enright announced will be the greatest police school in the world has been organized in New York City by the consolidation of the three existing training schools. William H. Edwards (better known as "Big Bill" and without whom no Princeton football meeting is complete) has been named president of the new police academy.

*

Graft exposures in Detroit which have given the city much national publicity irritating to her civic pride have turned out to be almost farcical. Persons mentioned in the findings of the one-man grand jury are being dismissed by the courts on the ground that no cause for action exists and evidence is being gathered to institute impeachment proceedings against the judge who constituted the grand jury.

*

Sir John Sulman, chairman of the Federal Capital Advisory Committee concerned with the planning of the new Australian capital of Canberra, has submitted a report on municipal government in the United States which recommends the adoption of the manager form for the new city. There was strong local feeling that commission government, similar to that of Washington, was the correct form but Sir John believes that the three commissioners should not undertake direct administration themselves but should appoint a manager. The prime minister has intimated that the recommendations contained in the report will be adopted. Those who had the pleasure of meeting Sir John on his recent tour of inspection in the United States will be interested in learning of his favorable impression concerning the success of the city manager form in America.

*

Recently in the supreme court of Arizona[1] the constitutional provision of that state for the recall as applied to the judiciary was upheld

[1] *Abbey* v. *Green*, 235 Pacific Reporter, 150, 157 (1925).

against the objection that it is in conflict with the federal constitution since it is "not in harmony with the basic ideas of our institutions, tends to undermine the independence of the courts, and is contrary to public policy." "All these questions," said the court, "pertain to the sovereign powers of the people in their political aspects, have been unalterably settled, and may not be changed except in the manner provided by the constitution."

J. D. B.

*

Readers of the REVIEW who have followed the development of Governor Pinchot's personnel system in Pennsylvania may not agree as to its effectiveness. Personally, we think it has been working well, and all will agree that is in decided contrast with what has been customary in Pennsylvania. The customary practice is exemplified by recent action of the newly elected state treasurer, who had formerly served as auditor general. When he became treasurer he dismissed 27 employees and filled their places with others who had been with him in the auditor general's office. The holders of practically all important treasury jobs, from cashier down, were released and men from the auditor general's department substituted. The offices of both treasurer and auditor general, being constitutional, do not fall within the new administrative code and the governor's personnel system does not extend to them.

*

Civil Rights of Civil Servants

The question of participation by civil servants in national and local elections as candidates for parliament or for county and borough councils has been raised again in England, and has been made the subject of a report by a special committee of the treasury, known as the Blanesburgh Committee. With respect to parliamentary candidature, the report recommends that the present rule, that each crown servant resign upon becoming a candidate, be continued. Whether crown servants may become candidates for local office should remain, according to the report, in the discretion of the head of the department.

The committee felt that, by granting full political rights to the civil servants, their position of impartiality and their ability to work under the government of the day might be injuriously affected. In the opinion of many public employees, expressed through their organ, *The Civilian*, this is a reflection on the "solid sense" of the British civil servant, who can be trusted not to abuse his full rights of citizenship.

The restrictions upon the employees in the competitive classified service of our federal government are more severe than in England. Such persons are not only forbidden to become candidates for office, but are prohibited from accepting office in any political party or taking active part in any political campaigns, national, state or local.

The National Federation of Federal Employees, like the civil servants of Great Britain, oppose this restriction upon their liberty of political action, but their attitude seems to be largely one of sentiment because of injured *armour propre*. Protection in favor of tenure and against political assessments and pressure are practical considerations which any civil servant will prefer to unlimited political activity with these safeguards absent. The civil servant had best refrain from politics if he does not wish to become the victim of politics.

A NEW METHOD FOR COUNTING PROPORTIONAL REPRESENTATION BALLOTS

BY HAROLD F. GOSNELL
University of Chicago

THE election of the Cleveland city council a year and a half ago by the Hare system of proportional representation showed that it is possible to overcome some of the mechanical difficulties of the single transferable vote system even in a large constituency. However, the count was an expensive and a long drawn-out process. It took six days for a specially trained staff of two hundred clerks to complete the central count in the manner described in the Cleveland charter.[1] My interest in election systems led me to try out a new method for counting and sorting ballots according to the Hare system. Under the auspices of the Illinois Branch of the Proportional Representation League, Robyn Wilcox and I carried out a demonstration election by the use of a mechanical card sorting and card counting machine.

It was assumed for purposes of the election that Congress had authorized the election of a commission of five members to consider methods of dealing with the child labor situation in this country. Some 3,552 ballots were marked by members of local organizations in Chicago and by students in the political science classes of several universities. The names of twelve nationally known persons were voted upon for the hypothetical commission.

The instructions appearing upon each of the ballots read as follows:

> Put a cross X in column 1 opposite the name of your first choice. If you want to express also second, third, and other choices, do so by putting a cross X in column 2 opposite the name of your second choice, a cross X in column 3 opposite the name of your third choice, and so on. In this way you may express as many choices as you please. The more choices you express, the surer you are to make your ballot count for one of the candidates you favor. But do not feel obliged to express choices that you do not really have.
>
> A ballot is spoiled if more than one cross X appears in any of the columns headed 1, 2, 3, and so on. If you spoil this ballot, tear it across once, return it to the election officer in charge of ballots, and get another one from him.
>
> (The arrangement of this ballot differs from the ordinary arrangement, the object being an experimental one in the use of an electrical counting machine.)

Although the arrangement was a novel one for a proportional representation election, less than one per cent of the ballots received were invalid. The data on the paper ballots were transferred to the standard Hollerith punch cards by a single operator in eight hours. The punches on the cards were made to correspond with the cross marks on the ballots. If money had been available for the purpose, it would have been possible to have each one of the voters in the election punch his own card or ballot. Punch machines could be provided or the ballots could be so perforated that the voter could use any pointed instrument to indicate his choices.[2]

The entire count of the 3,552 ballots which required eight different transfers

[1] R. Moley "Proportional Representation in Cleveland" *Political Science Quarterly*, XXXVIII, 656. See also *Proportional Representation Review*, January, 1924.

[2] The writer has no patent on any such device. His connection with mechanical sorting devices began with the statistical study of non-voting in Chicago. See Merriam and Gosnell, *Non-Voting: Causes and Methods of Control* (Chicago, 1924), Appendix.

were completed by two persons in the record time of one hour and fifty minutes. The first choices were counted and sorted in fifteen minutes. Three of the candidates elected received their quota of 593 ballots on the first count, but the other two candidates elected were not chosen until the ninth count.

A comparison of the time taken to make the demonstration count with that taken to complete the Cleveland count brings out some striking differences. With the mechanical sorting machine two persons did in less than two hours what would have taken twenty-two persons three hours working without the aid of the machine. On straight counting and sorting the machine worked at the rate of 250 ballots per minute. The Cleveland clerks did their checking at the rate of 33 ballots per minute. The time taken in recording the results would be about the same.

The experiment showed that it is possible to improve the technique of proportional representation and that with a highly selected group of voters these improvements in technique were not unduly confusing.

THE SIXTH ANNUAL MEETING OF THE NATIONAL LEAGUE OF WOMEN VOTERS

BY EVELINE W. BRAINARD

"*In today already walks tomorrow.*"

THE League of Women Voters meets yearly to lay out its program of study and of legislation. This year some six hundred women from all over the land gathered at Richmond, Virginia, from April 16 to 22 to decide on plans which had already been discussed in every state league. The matters of public concern within the scope of the organization fall under eight committees: Efficiency in Government; Child Welfare; Education; Legal Status of Women; Living Costs; Social Hygiene; Women in Industry; International Co-operation to Prevent War. Each of these committees is under a national chairman with a chairman in each state league, thus insuring that the different parts of the program be dealt with by people acquainted with the questions involved. These committee heads are, of course, being human, a bit like college professors —each believes her department to be all-important and in consequence the program seems long to the uninitiated. But it is, after all, just like a college catalog, each local league choosing the topics interesting to its members.

IMPROVEMENT IN GOVERNMENT

Much time was given to practical discussion of what had been learned from the getting-out-the-vote campaign of last year. Complications hedging registration were found so frequently the excuse of the non-voter that at the state registration laws and their simplification heads the suggestions for study. Simplification of the state administration, county government, the manager plan, are also among study topics and the shorter ballot, extensions of the merit system in the civil service, and suffrage for the District of

Columbia among the possibilities for legislation.

There was unanimous opposition to proposals which would make amendments to the Federal constitution more difficult than at present. Miss Lathrop described the bill before the last congress in the following words:

> Another amendment to the constitution is now urged which would render amending far more difficult than at present. Its undemocratic spirit is shown by its proposal that as soon as thirteen states have rejected, the amendment is lost. This gives no opportunity for reconsideration and the whole text of the amendment displays the purpose to render amendment practically impossible. It exalts minority rule into a principle of law.

The League counts the passage of the Maternity and Infancy Act in 1921, popularly known as the Sheppard-Towner measure, one of its definite services to the country. The report of what has been accomplished under it in the four years opened the conference of the Child Welfare Committee, Dr. Florence McKay of New York and Dr. Mary Riggs Noble of Pennsylvania telling the story. This stands side by side with the ratification of the Child Labor Amendment on the committee's recommendations because its five-year appropriation ceases next year and its friends must show cause if they are to hope for a continuance of support. As Miss Grace Abbott, head of the Children's Bureau, explained, it is peculiarly difficult to prove the worth of the work done under that bureau because new counters of value are there used, not dollars and cents, but health and well-being. The saving of lives of mothers and babies is hard to reckon in cash since the cost of funerals is the only immediate and obvious expense!

A discussion, typical of the League of Women Voters, sprang up instantly when the committee on the legal status of women brought forward proposals as to a uniform marriage law. It was not the details of the measure that were called in question, but the scant time for consideration of a matter so important and of results so far-reaching. It was decided that this plan should go out for discussion at local leagues during the year and come up again next April with the delegates ready for it. Again the convention affirmed its opposition to all attempts to cure special defects in our laws by wholesale changes and blanket amendments. The name of the committee, said Miss Esther Dunshee, the chairman, might better be called legal status of wives, since the disabilities are practically all against married women, the only two on the list covering all women being representation on party committees and jury service.

AGAINST WAR

Doubtless the best known and most popular work done by the League of Women Voters is that under Miss Ruth Morgan for international co-operation to prevent war. Last year it was mainly due to this committee that the open hearing on the world court was granted by the senate foreign relations committee. Of the outlook for the world court, Miss Morgan said:

> We must get the world court! With an estimate of 85 per cent of the country for it, and at least 75 per cent of the senate favorable to it, with the President of the United States urging it and the opposition party demanding it, with the two great parties on record in the platforms for it, why not? Well, its enemies have not admitted defeat. They mean to fight all summer against it up to the date, December 17, now set for the vote. We cannot afford to slumber now or take anything for granted.

The resolution in the matter of law enforcement as finally adopted after warm discussion on phraseology is more definite and inclusive than the plank proposed by the League to the platform

committees of the national parties before the last presidential election.

Since the merit system in civil service has been adopted as a policy of the National League of Women Voters, as expressed in the program of the department of efficiency in government and also in the effort of the league at the last national convention to have such a plank adopted by the political parties, we do at this time most heartily affirm our belief that this great principle should be specifically applied to the appointment of officers in the federal prohibition unit in the interests of more effective enforcement of law.

We further urge a loyal co-operation with the federal government on the part both of individual citizens and of state governments, in the further effective establishment of prohibition as expressed in the constitution of the United States and the written law of the land.

NOT ALL SERIOUS

However solid its topics may appear, the convention took its sessions with much gaiety, and there was no merrier evening than the one devoted to the special guests of the convention,—seventy young women, undergraduates from seventeen colleges and normal schools, and representatives of girls in industry, in business and on the farm. A half dozen youthful orators told their elders what they could do to interest young people in practical work for good government. Fine ideas they had, too, and notebooks were in use everywhere.

Justice Florence Allen of the Supreme Court of Ohio closed the evening with a "charge to the jury of young voters." None of them will ever forget this woman, at once highly trained, noble in bearing, wise in advice and withal of never-failing humor. Her witty account of the visit to the Old Bailey led on to serious words on the condition of criminal law in this country. Repeating Chief Justice Taft's statement that our criminal administration is a "disgrace to the nation," she charged the women citizens before her:

We must not sit still in indifference and ignorance with such a state of affairs. Do not think that the well-known delays of legal procedure are a matter of small moment. Delay always works for injustice, not justice; always works in favor of the criminal and against the innocent; always works in favor of the rich as against the poor.

PRINCIPLES OF ADMINISTRATION

BY LUTHER GULICK
Director, National Institute of Public Administration

A comparison of American and English statements regarding principles of administrative organization and practice. :: :: ::

Are there recognizable "laws" or "principles" in the field of public administration? The question has been answered indirectly by several students of government who have made the effort to extract from experience the immutable laws of administration and to distill them in a simple form for practical application. The Bureau of Municipal Research group, headed by Frederick A. Cleveland and Charles A. Beard, have probably pushed further than others in this country, at least the pioneering has fallen to them. This is probably because the research bureaus have had the opportunity to study the facts first-hand and because they have been

faced with the necessity in connection with their surveys and advisory work of formulating rules for practical application. The short balloteers, led on by Richard S. Childs and A. R. Hatton, have also done yeoman service in the formulation of rules of government organization. In all this groping for principles, one would hesitate to claim that the process has been thoroughly scientific. The municipal researchers (fortunately for progress) have not enjoyed the academic calm which would permit them to wait until all the facts were in, nor has it been possible to suspend judgment or action until every hypothesis could be thoroughly tested. And there has been a certain zeal, especially with the ballot-shorteners, which has ferreted out principles calculated to clothe with the sanctity of natural law the beliefs and dogmas of the cult.

THE AMERICAN STATEMENT

An American statement of principles has never been brought together in a complete systematic form. Perhaps the summary presented by Dr. Beard in the *Administration and Politics of Tokyo*[1] is as comprehensive as any, though this summary was presented, of course, in connection with the problems of an Oriental metropolis. The principles are stated as follows:

> The number of departments in a city administration should be determined by the number, variety, and magnitude of the major functions vested in the city government as a whole.
>
> Each department should have as nearly as possible a distinct function or class of functions to perform, if the volume of business warrants this.
>
> All closely related functions should be grouped together in the same department, and the number of bureaus or divisions within the department should be determined by the number, variety, and magnitude of the functions assigned to it.
>
> The power of each department head and each bureau (or division) chief should be commensurate with the responsibilities imposed upon him.
>
> The responsibility for each function and the power to discharge it should be vested in a specific officer, and the lines of responsibility from subordinates to superiors should be definitely fixed.
>
> The head of each large department should have an independent staff or agency to keep him informed as to the performance of his subordinates and as to their positive achievements.
>
> As functions cannot be sharply separated and a certain amount of overlapping is necessary, provision should be made for the close cooperation of related departments.
>
> There should be an accounting control independent of the operating or directing head of each department.
>
> The mayor or chief of the entire administrative structure should have the power to appoint and discharge his department heads and to direct their work within the limits of the law. He should have a research staff charged with two functions: (1) examining and reporting on the work of departments and (2) searching for new and improved methods of operation.

A. E. Buck has summarized the rules under the following five heads:[2]

1. *Departmentalize all administrative activities.* All administrative offices, boards, commissions, and agencies of the state should be consolidated into a few departments, each of which comprehends a major function of government, such as agriculture, finance, public welfare, or public works. The major functions should be determined mainly by the conditions within the state and the scope of its existing activities. For example, reclamation may be a major function in one state and not in another.

2. *Fix definite lines of responsibility.* Each department should be headed by a single officer appointed and removable by the governor. This arrangement fixes definitely responsibility for the administrative work of the government and makes the governor in fact, as well as in theory, the responsible chief executive of the state. The department heads can then constitute a cabinet to advise with the governor in matters of administration and to assist him in budget making. This principle involves, among other

[1] Page 47.

[2] *Administrative Consolidation in State Governments*, pp. 37–38.

things, the reduction of the number of elective administrative officers to two, the governor and the auditor, the latter to act as an independent check upon the work of the administration. It would be preferable to have the auditor appointed by the legislature instead of elected by the people, so that he might be the representative of the legislature in making a critical examination of the administration.

3. *Taboo boards for administrative work.* Boards or commissions should not be used for purely administrative work. They are generally found inefficient owing to division of powers and absence of initiative and responsibility. Ex-officio boards are almost never effective. Whenever there are quasi-legislative, quasi-judicial, advisory, or inspectional functions within a department, a board may with advantage be attached to the department to perform any one of these functions.

4. *Co-ordinate terms of office.* The term of the governor should be four years, and the terms of the department heads, if they are to be definitely fixed, should be carefully adjusted with reference to that of the governor. The department heads should not have longer terms than that of the governor. It is preferable to let the department heads serve at the pleasure of the governor. However, the members of boards performing quasi-legislative, quasi-judicial, inspectional, or advisory functions under the departments may be appointed for longer terms than that of the governor.

5. *Organize departments internally.* Closely related work in each department should be grouped under appropriate bureaus and divisions, responsibility for the work of each bureau of division being placed on a single officer directly accountable to the head of the department. The bureau heads should, as a general rule, be appointed by the department heads under which they work.

Somewhat the same field is covered in a paper which I presented to the National Tax Association in 1923 which dealt with the organization of the state tax department.[1]

THE ENGLISH STATEMENT

Montagu H. Cox, clerk of the London County Council, has endeavored to make a similar summary based on his observation and study of English government. His statement is as follows:[2]

1. The duties to be performed by officers of a local authority should be grouped into departments, each department being entrusted to a single responsible officer. He should be provided with a sufficient staff.

2. Departments should be formed according to (i) professions, and (ii) duties of similar character. A separate department, more or less self-contained, may be formed for any single service in which the professional duties are so interwoven with its administration that its separation would be difficult.

3. The number of departments should be as small as possible.

4. Each department should be of sufficient size to justify the employment of a whole-time head of the department at a salary sufficient to attract a man of qualifications and ability.

5. Co-ordination between departments should be entrusted to the town clerk.

6. The office of town clerk (or clerk of the council) should not be combined with any other office.

7. The number, status, and scales of pay of the several grades of staff required in each department should be assessed and reviewed periodically.

8. Scales of pay and other conditions of regulating the prospects of officers, such as promotion, holidays, sick pay, and interchangeability, should be clearly laid down.

9. The technical and professional staff should be recruited by public advertisement upon clearly stated qualifications.

10. Administrative and clerical (*i.e.*, routine) staff should be recruited by means of competitive examination. The clerical should be eligible for transfer to the administrative by examination in specialized subjects which are the concern of local authorities. Some provision should also be made for direct entrance to the administrative staff.

11. Provision should be made for the interchange of administrative staff between the several departments, by way of exchange and promotion.

[1] *1923 Proceedings*, p. 266.

[2] *Local Government News*, April, 1925.

A comparison of the statement of principles by Mr. Cox with the statements above which have been taken as representative of American experience shows a very interesting agreement on the essential points. Mr. Cox throws a great deal more emphasis upon the problem of personnel. Fully half of his points deal primarily with this problem. Though we are beginning to recognize the great importance of sound personnel policy and administration in the United States, and though no one would disagree with the principles of personnel laid down by Mr. Cox, the American statements do not emphasize personnel to this extent. Mr. Cox is more specific in defining departmental lines in point 2. His insistence that the number of departments should be small, that each department should be entrusted to a single responsible officer, and that the town clerk should be free from line services and should serve purely as the co-ordinator between departments, is thoroughly in accord with the principles as formulated by American students including the researchers and the ballot-shorteners. Even the wide difference in the form of local government on the two sides of the Atlantic has not served to carry the students of government far apart in their statements of principles of public administration.

MUNICIPAL PROGRESS UNDER MANAGER GOVERNMENT

I. THE STORY OF PASADENA

BY HARLAN W. HALL

The test of city government is the comfort and well-being which it affords its citizens. Is the park system adequate; are the streets ample, clean and well paved; is the water supply good; is the city growing to a plan? This is the first of a series of articles which will describe how the city manager form is measuring up under these tests. Does more efficient government pay dividends? This and articles to follow will seek to answer the question. :: :: :: :: ::

PASADENA, which celebrated the fiftieth anniversary of its founding within the past half year, has accomplished more than one-quarter of all of its notable physical improvements within the past four years under the city manager-board of directors form of government. In other words, in less than one-twelfth of the city's life more than one-quarter of its public improvements have been made.

The population to be cared for has nearly doubled in the same period, and this problem has been met by the rapid extension of paved streets, new sewers and water pipes and the installation of adequate lights by the municipal lighting department.

EXTENT OF PAY-AS-YOU-GO

Under the manager-directors form of government a very notable feature has been the value of permanent improvements which have been made

without recourse to bond issues. In the past four years $1,261,785.99 has been expended out of the general fund on such improvements and in addition, from the earnings of the light and power utility an investment of $1,093,-758.55 has been made in like extensions, while additions to the water utility of the city from earnings amounted to $1,139,555.40, or a grand total of $3,495,099.94 for permanent improvements from funds other than bond issues. The sum of money mentioned as invested from the utility surplus includes the sum set aside for interest and depreciation, both of which accounts are set up on the books just as though the utility were privately-owned.

From the inauguration of the manager-directors form of government in Pasadena with C. W. Koiner, previously general manager of the successful municipal light department and city controller, as city manager, a policy of fairness to city employes was inaugurated. It was a time of advancing wage scales and the city at once adopted the policy that its employes should receive equivalent salaries to those paid for similar work in private employment.

This salary equalization brought about another form of equalization which in a goodly measure counterbalanced the advance in wages, namely, the policy of making fees for inspection and supervision large enough to defray the actual cost of such service. In many cities such fees are merely nominal, but in Pasadena when an inspection or supervision service is required the one receiving the benefit pays what it costs.

With higher wages came a movement to consolidate public positions. This policy of consolidation has resulted in a saving of more than $100,-000 a year and has increased rather than impaired the efficiency of the municipal service.

Figures tell an interesting story of the result of this managerial policy. In the first year of manager-directors form of government 81 per cent of the money expended by the city came from direct taxes. In the last fiscal year only 64 per cent came from direct taxation.

Outstanding improvements inaugurated and now well under way have been the great civic center project with its group of municipal buildings, the opening and extension of major business streets, and the acquirement of much land for park purposes.

CIVIC CENTER AND CITY PLANNING

The civic center project is the first and greatest step in carrying out a comprehensive city plan formulated by a city planning commission. All the land for this civic center, approximately one hundred separate parcels, has been acquired and the contract for the first building let at a figure within the estimate.

As a move of good business only such buildings as stood in the immediate way of building operations were demolished or moved away, the others being allowed to stand for rental purposes, a very substantial sum being netted towards the project by this means.

Pasadena has since its founding had the making of a "shoe-string" business district because there was from the start practically but a single main business street reaching from the west to the east side of town. Under the present form of government two main business streets, one to the south and one to the north of the main business thoroughfare, are being opened through, the rough grading in each instance being already finished.

This major street opening work

required in each case the condemnation of more than a mile of right-of-way and has been but the most prominent instance of an intelligent movement to relieve traffic and business congestion by means of street openings.

At the outset, what is now Pasadena was merely a collection of small orange groves. As the village grew each orange grove owner subdivided his rancho very much as he saw fit, leaving a city filled with blind-end streets and no-thoroughfare highways. Practically all but one of the long-talked projects for bettering resultant conditions have been brought to fruition in the past four years.

Street improving has kept pace with other work. Under the manager form of government 3,458,522 square feet of paving, 410,089 square feet of sidewalk, 211,750 square feet of gutter, 84,096 lineal feet of curbing and 28,604 lineal feet of grading have been done.

Keeping pace with street work, more than 34 miles of sewers have been laid and 20,876 lineal feet have been added to the city's lighting system.

PARKS

Pasadena is bisected by the great Arroyo Seco—both a problem and a blessing; a problem because it has frequently to be bridged, and a blessing because its large acreage is being steadily acquired by the city for park purposes. The Arroyo Seco (Dry River) is a gigantic, wooded wash extending from the mountains north of Pasadena to and through the city of Los Angeles, dumping into the Los Angeles River. It now contains beautiful Brookside Park with its magnificent double open-air swimming pools, three baseball grounds, free tennis courts, and picnic facilities for about 20,000 persons. It is also the site for the famous Rose Bowl, where the annual East-West football classic is played on January 1 under Tournament of Roses auspices.

In this beautiful valley the city has acquired an additional 171 acres of land under the present form of government and is moving for the acquirement of hundreds of acres more. Two new bridges, bringing the total to six, now span the Arroyo Seco, and one of them is the largest single arch reinforced concrete bridge in the world.

In reasonable space it is next to impossible to mention in detail all of the improvements that have come with the active and energetic form of government now in vogue. One great project brought to completion has been the sewage disposal system at the city farm, where about ten million gallons of sewage is successfully treated each day. The water department has laid 9,000 tons of pipe and expended $1,419,736.56 in the past three years alone, caring for 5,809 new water meters. The municipal light and power department has spent $1,124,204.69 in the same period and has added 6,810 meters at the same time in 1924, making a net revenue $100,000 greater than ever before in a single twelvemonth.

ZONING AND FIRE PROTECTION

One of the very notable accomplishments has been the zoning of the city. This protective measure was accomplished through the work of the city planning commission. The act serves to prevent the injury of exclusive residence districts and yet stimulates the building up of industrial and business sections.

The fire department has been given a new central fire station and another suburban fire house, while the installation of an adequate, automatic fire alarm system has aided in bringing the

department to such a state of efficiency that a reduction in fire insurance rates, amounting to $100,000 for the city, has been secured.

Three great districts annexed within the past few years have been served with sewer, water and light systems; two branch libraries, and a library building especially for children, have been constructed; every park in the city has seen material improvement and a municipal rock crusher built so that contractors might always find available proper quality crushed rock; and, for the protection of the park and stadium properties in the Arroyo Seco, a channel has been constructed by the city engineering department.

Perhaps to be ranked as a major accomplishment, was the amendment to the city charter permitting the city to do its own public improving work in case satisfactory tenders were not received. This plan has resulted in the city doing much work and has materially reduced the cost of all street improving.

And with all that has been accomplished, in a city which in twenty-five years has grown from a population of less than 10,000 to one of 75,000 at least, only 35 per cent of the bonding capacity has been invoked to meet the demand of progress. Only 21 per cent of the total bonding capacity has been used for general city purposes, both the water and light departments caring for their own bonds under their own earnings.

Nor has progress stopped, for there are at present eight large street improvement projects going forward; the great Linda Vista section has voted to improve the entire district under the 1915 Improvement Act; petitions are in for several more important street openings; a new reservoir is under way, and all this in a city which by the law is limited to a dollar tax rate for general city purposes.

LOS ANGELES' BOLD PLANS FOR A CIVIC CENTER

BY GARDNER W. GREGG

The Allied Architects' Association has planned a civic center which will preserve tradition, expedite traffic, eliminate slums and group public buildings in pleasant and inspiring harmony. :: :: ::

The birth of civic architecture has been late in Los Angeles owing to her rapid growth, which is, perhaps, unsurpassed by any American city within an equal period of years. When nearly one hundred and fifty years ago Filipe de Neve set forth from the Mission San Gabriel with a small band of soldiers and priests and founded the Pueblo de Nuestra Senora La Reina de Los Angeles at the foot of a small ridge of hills, some eleven miles away, he laid out plans which were quite adequate for his day, erecting the main buildings about an open plaza, and outlining a street plan for later development.

The gradual influx of Americans, due to the gold rush of '49, brought about some changes, the placing of the business district on the east side of an earth mass known as Bunker Hill, and the establishment of the exclusive section

on the crest of the hill, but the original plan was not entirely discarded until much later.

The meteoric growth in Los Angeles has come during the past twenty to twenty-five years, during which time the population has increased more than tenfold, bringing with it an increased housing need throughout the city. Business, needing expansion, has drifted further east and south, the streets have been extended, new residence districts were constantly springing up. The original city plan was abandoned, and it was impossible to adopt a new one, rather it was a case of fitting in new business structures wherever space warranted, the governmental buildings were overwhelmed, many of the departments being forced to lease additional space in office buildings.

CIVIC CENTER A NECESSITY

To meet the present and future demands of the city, county, state, and national governments, it was decided that a civic center was an absolute necessity for Los Angeles. Therefore, over a year ago the county board of supervisors and the city council entered into a contract with the Allied Architects Association by which the latter were to draw up plans for an adequate civic center within a specified area, without other financial remuneration than the nominal sum of one dollar.

After eleven months of intensive work on the part of the seventy eminent Southern California architects comprising the Association, the civic center plans were presented to the county and city officials for adoption.

Under these plans the terribly congested traffic of the downtown section will be relieved, one of the greatest present eyesores of the city will be transformed into a great park, and the administrative buildings of the various governments will be grouped for all time in a setting well worthy of their civic dignity.

PLANS FOR BUNKER HILL

Bunker Hill, once the proud residence district of the city, has fallen upon evil days in the past quarter century. When business found that expansion was necessary it followed the line of least resistance which led away from the hill and moved further to the east and southward. The hill, deserted by business interests on the east, was, in turn, abandoned by the exclusive who established themselves west of the hill, where a period of retrogression and stagnation set in. The buildings, fine in their day, fell into a state of decay, undergoing the usual stages of degeneration until at the present time they stand, stark spectres against the horizon, unsightly, unhonored semi-slums, and constituting a great fire menace.

The plans of the Allied Architects would create on this hill a beautiful park, surmounted with a Mall nearly a mile long and fringed with sites for future buildings of a cultural and semi-public nature. This park, called Las Alturas (the heights) on the plans, would serve both the utilitarian and the æsthetic requirements of the most exacting mind, since its intrinsic beauty would be supplemented with a means of traffic alleviation by wide boulevards which would encircle the hill for the use of pleasure motors, while trucking traffic would be diverted by great well-aired and well-ventilated tunnels of the modern order cut under the hill.

The need of parks in the center of large cities cannot be too highly emphasized. The citizen, and especially the resident of the poorer sections, must have some open space of shrubbery, green grass, and trees wherein to dream, and from which to derive open-air recreation. At the present time Los

Angeles is sadly lacking such areas well within the heart of the city. Las Alturas would help fulfill this need, becoming a charm spot in the downtown area, with the business section but a stone's throw away. Visitors would be enabled to leave any of the big downtown hotels, motor through this park, connecting with Mullholland Drive through the Hollywood Hills, and reaching the beaches and the countryside in ease over a scenic drive rather than through the congested streets which mark this trip at the present time, for all the boulevards encompassing the park will connect directly with the densely populated country east and north of town, giving immediate access to the business section.

GROUPING OF GOVERNMENT BUILDINGS

Lying east of Las Alturas and extending as far as Los Angeles Street, some five blocks distance, would be the area known as the administration center proper, bounded on the north and south by Temple and First Streets. Here the administrative buildings of the city, county, state, and federal governments would be situated about a great plaza, in a setting of green lawns and shrubbery, within easy reach of city and county alike. In order that the employees of the various governments might work with increased efficiency, unharassed by street noises, the Association has planned the depression of the north and south streets through this area, or rather, because of the location of the administration center upon a low ground ridge, it is more a case of a raised plaza than of street tunneling. The traffic passages would be of the well-lighted, well-ventilated, wide and modern type similar to those developed in the proposed tunneling of Bunker Hill, tending to accelerate rather than to retard through traffic. Due to the tremendous housing space which will be required by the governmental departments using the buildings to be erected here, the Association has laid out sites for structures of the monumental or office type, thus providing ample room for the future as well as the present space requirements.

The two historic landmarks of Los Angeles, namely the old plaza which was laid out by Filipe de Neve and the Mission Church, now in danger of becoming totally overshadowed by commercialism, would be preserved for all time under these plans which make the church the dominating feature of a smaller park, while the plaza would remain unchanged. Buildings fronting the latter would be razed and the structures replacing them would be built on the low order, typical of the era of Spanish domination in California. This sympathetic treatment combined with the old world atmosphere permeating this neighborhood at the present day would readily recall to the eyes of the visitor the scene as it was in the early days when Spain was mistress of the seas.

A CITY'S TRADITION

Too much emphasis can never be placed upon the value of a traditional background to a city. Tradition enriches not alone the mind of the historian but the coffers of the city treasury and of the business man, aside from serving as an inspiration to civic pride and community spirit. And tradition is easily forgotten: it can really only be preserved through landmarks and structures. Remove these and tradition vanishes, never to be restored, since tradition is almost impossible of visualization save through some concrete object.

The plans of the Association will give these landmarks fitting surroundings,

restoring them to much of their former state, so that the visitor will be enabled to visualize in his mind's eye a life here in the days when gallant young caballeros clattered through the streets or sang before the windows of their soft-eyed senoritas, and the black-gowned monks of the Franciscan order plodded on their weary way to the wasteland missions where they were destined to live, and often to die, bringing the Catholic faith to the pagan Indians. One will be able to evoke memories from the old walls of the Mission, to hear the call of long ago when the Angelus sounding from the belfry recalled the laborers from the fields, the light laughter that once rang softly through the streets, the soldiers drilling in the plaza in preparation for Indian attacks, in fact all of the phases of eighteenth-century life in El Pueblo de Nuestra Senora La Reina de Los Angeles. The ghosts of the conquistadores walking in the moonlight of the weird hours between midnight and dawn will look on the restored relics of their day and rest content. Tourists thronging the plaza by daylight will feel their presence and depart realizing that they have been looking upon the days of long ago.

PLAN COMPOSED OF SEPARABLE UNITS

East of the administration center proper, extending one block to San Pedro Street and confined within the same north and south boundaries as the former, lie a tentative unit comprising the Union Terminal Plaza to be developed in case the union station idea is adopted by the railroad officials. If the project is rejected this unit would be discarded and the civic center would be closed by the erection of a large building at Los Angeles Street.

It is one of the many admirable features of this plan that it is composed of a series of separate units, each capable of independent and gradual development, yet when completed each tying in with the rest and thus forming a perfect whole. By this means the cost of completion is not thrown upon the taxpayer at one time, rather it is distributed over a period of years, the development of various units being undertaken as their necessity becomes apparent, and as funds become available for the purpose. The engineering problems involved are comparatively simple and inexpensive, and when completed Los Angeles will be famed throughout the world as the possessor of civic edifices ranking with the civic architectural achievements of great world cities both here and abroad.

The Allied Architects Association sponsoring these plans is an organization comprising seventy of the most prominent architects of Southern California. It was formed early in the summer of 1921 for the purpose of affording civic governments the best in architecture at a moderate cost. Since its inception it has completed many contracts for both city and county, the proceeds of which are devoted to the cultural development of the community after the mere working expenses are deducted. The Association has established and is maintaining at its own expense a free architectural and fine arts library in Los Angeles for the use of the general public interested in architecture. This library is the only one of its kind west of Chicago and is believed to be one of the finest collections dealing with architecture in this country. Also the Allied Architects are conducting the architectural department at the University of Southern California, and have established courses in design for draftsmen.

OKLAHOMA ADOPTS PREFERENTIAL VOTING IN THE PRIMARY

BY HARRY BARTH
University of Oklahoma

Jack Walton gets the credit for frightening Oklahoma into a system of preferential voting as an escape from minority nominations. ::

THE political history of Oklahoma has in recent years been full of bitter, partisan contests. This is especially true of the primaries. There are no political machines in Oklahoma in the eastern sense of the word. No prepondering coalitions exist to iron out factional differences and steam-roller independent candidates for office. The result is in a way political chaos. Any person with a hundred thousand dollars to spend and ambition, can run for office with a reasonably good chance of election. Any person who can unite one of the larger economic groups, as, for example, the farmers or the oil men, or the chamber of commerce element, stands a very reasonable chance of arriving at political success. As a result, the number of men who desire to serve the state is unusually large. The field is invariably split in a number of directions with any one of three candidates having a good chance for victory. There is seldom a clear majority of the total popular vote for any one candidate in either the Republican or Democratic primaries. Minority nominations have been a constant source of irritation.

ABUNDANCE OF CANDIDATES ASSURES PLURALITY CHOICES

Attention has been called to this state of affairs at frequent intervals during the past ten or fifteen years by men interested in perfecting the machinery of the state government. The defect remained, however, uncorrected, until the Jack Walton affair brought home most clearly the danger inherent in the situation. Here a candidate, absolutely unfit to hold public office, rose to the highest position in the state through the possibility of minority nominations. His election to the senate of the United States was only narrowly averted, after he became the candidate of the majority party of the state through the operation of the plurality system.

More buncumbe has probably been written in the press outside of Oklahoma, and particularly in the press of the eastern metropolitan areas, in regard to Jack Walton than about any other person in recent years. Walton assumed heroic proportions in certain of these papers. He became a savior almost, a mythical personage, who was fighting the battle for religious liberty and for the freedom of the individual out in the short grass country. Here was a new prophet risen to protect everything for which America stands. All of which was sheer rot. Religious freedom is no more or less insecure in Oklahoma than anywhere else in the United States. The denominational fervor does not approach its strength in the older sections of the country. The plain fact is that men are too busy making money to squabble over religion. In addition, there never was unusual disorder in Oklahoma. Much of what was written in the eastern press

arose in the minds of imaginative reporters. Life and property are quite as safe in Oklahoma as in other sections of the country, and a good deal safer than in some of the metropolitan areas in the east. What happened was that Walton became governor on a radical program, and then, either was unable to or consciously refused to live up to his platform. As a result, his friends were alienated, and in order to win back his rapidly diminishing following he made an issue of the Klan, and attempted to create a serious problem where nothing alarming existed. In this he failed.

After his impeachment and conviction as governor, occurred the best illustration of the failings of plurality primaries. His nomination for the governorship was one example. His nomination as Democratic nominee for the senate was a better. The field was split five ways. In the senatorial primary Walton received an extremely small per cent of the total votes cast. He became, however, the Democratic candidate. He traveled over the state indulging in demagogic appeals, attacking the blood-sucking corporations, promising eternal prosperity, and announcing himself as the people's choice in the most approved Gumpian manner. He secured the allegiance of about one-seventh of the voters of the state, and then set forth to become the representative of Oklahoma in the senate of the United States. Fortunately, independent voting has developed to a considerable degree in Oklahoma, and, although the people voted for a Democratic president, they turned Jack Walton down by 150,000 votes.

THE PREFERENTIAL BALLOT DEMANDED

The shock, given the people by the narrow escape from a Walton as the Oklahoma representative in the senate, made itself evident, when the legislature convened in January of the current year. The most influential newspapers, the leading commercial groups, the outstanding politicians, all resolved to put an end to minority dictation in the primaries. Editorials educated the people, and it may be stated that a preponderant number of people were of the opinion that a preferential primary law had to be placed in the statutes. When the legislature convened a number of bills were at once introduced, all proposing a definite change.

These were of the same general plan. They differed, however, in the value that was assigned to second and third places. They also differed as to whether a vote upon second and third choices should be necessary in order that the ballot be counted. It was not until the last day of the session that the house and senate were able to agree upon a bill, and not until the governor had used his influence to secure a compromise measure.

Briefly, the law provides that in case there are two candidates, only one choice shall be expressed, and the candidate with the larger number of votes shall be considered chosen to office. In case there are three or four candidates, the voters are asked to express both a first and a second choice. When there are more than four candidates, the voter is instructed to express three choices. It is clearly stated in the instructions that unless the proper number of choices are expressed the vote will be cast aside. The ballot form is provided by law. This follows:

FOR GOVERNOR

First Choice;
Vote for One

John Doe.....	
Richard Roe.....	

FOR GOVERNOR

	First Choice; Vote for One	*Second Choice; Vote for One*
John Doe.....		
Richard Roe..		
John Smith...		
Same Jones...		

FOR GOVERNOR

	First Choice; Vote for One	*Second Choice; Vote for One*	*Third Choice; Vote for One*
John Doe.....			
Richard Roe.....			
John Smith.....			
Same Jones.....			
Tom Brown.....			

With ballots of this type there should be no difficulty encountered by voters of average intelligence in marking their ballots properly.

SECOND CHOICE HAS LESS VALUE

The question arose as to the wisdom of compelling an expression of choices other than the first. What if a voter should have no second choice? Under the law he is compelled to express such a choice. The situation will cause grave complaint to arise should a particular group have only one candidate acceptable to them in a field of five or six. This contingency will probably be rare, and certainly this particular evil is infinitely less perplexing than the one which the state faced under the old primary law.

The chief dispute in the legislature occurred over the value which should be assigned the second and third choices. The bill passed by the senate, known as the Looney bill, credited second and third choices with the same value as first choices. The administration *bloc* opposed this bill and favored limiting the value of second and third choices. This seems to be the more equitable practice, and was the one followed in the bill. It was provided that in case of no clear majority of first choices, the second choices should be added to the first after being divided by two. The man who then had the highest total should be declared the victor. In case of five or more candidates, if no one had a majority after the first and second choices had been added, the third choices were to be added after being divided by three. The candidate with the highest number of votes should then be declared nominated.

By limiting second choices to half value and third choices to third value, the modification was made much less radical than it would otherwise have been. Under the present law, a minority group has considerably greater chance of nominating a candidate than it would have had had the second and third choices been granted equal standing with the first. The modification, although possibly more just, is not as thoroughgoing as the radical reformers desired.

The law made a majority of the first choices the standard whereby the election should be judged. The law reads: "The candidate . . . receiving the largest number of votes shall be declared the nominee of said party to said office, if the total number of first-choice votes plus one-half ($\frac{1}{2}$) of the number of second-choice votes for

said candidate is equal to or greater than the majority of all first-choice votes." Thus, if a candidate should receive a majority of the first choices after the second choices are added in, he is declared nominated and the third choices are disregarded. This, of course, can only occur when there are more than four candidates in the race.

It will be interesting to watch the actual operation of the law. Oklahoma politics are fractured by innumerable lines. The coalitions which will be built in order to secure for candidates of the same stripe an exchange of second and third choices should make interesting political history. One thing is sure. A definite element of uncertainty has been introduced into Oklahoma elections. So far as Oklahoma may be said to have political leaders and an organization, the influence of the leaders and their ability to determine the results of elections should be considerably decreased.

WESTCHESTER COUNTY PARK SYSTEM

BY JAY DOWNER
Chief Engineer, Westchester County Park Commission

Twenty-two million dollars being spent for a park system will make Westchester County, New York, a good place to live. :: :: ::

Westchester County, New York, is developing a large-scale county park and parkway program unprecedented for its comprehensiveness and rapidity of progress. Between July 2, 1923, and April 20, 1925, a period of less than 22 months, the board of supervisors authorized park appropriations in the total amount of $21,798,000.

Westchester county lies immediately north of New York city's northern boundary and includes the territory forming the only mainland approach to New York. It has a shore line of about 40 miles along the east bank of the Hudson River and about 20 miles of water front on Long Island Sound between New York city and the Connecticut boundary.

EXTENT OF SYSTEM

The newly created park system includes water-front parks with beaches along the Hudson River and the Sound with interior park reservations, recreation grounds including golf courses and forest preserve areas. These various reservations are to be connected by a system of motor traffic parkways making them conveniently accessible from all parts of the county.

The parkways will serve a multiple purpose. They follow the stream valleys and consist of controlling strips of land on both sides of the water courses. The creation of such reservations forestalls the nuisance conditions such as dumps and sewage pollution which commonly develop along unprotected small streams with the growth of population. These reservations also provide the natural routes for motor traffic driveways and for trunk sewers.

The system includes more than 10,000 acres of park lands, about 122 miles of parkways and an aggregate of more than 9 miles of park shore line along the Hudson and Long Island Sound. The

administrative body is the Westchester county park commission, composed of 9 members, 7 men and 2 women, appointed by the county board of supervisors. It is composed of prominent professional men, business men and publicists serving without compensation. The important factors underlying the launching of this park program are the rapid growth of Westchester county due to its proximity to New York city and the enormous increase in motor traffic.

At the southerly extremity of Westchester county along the northern boundary of New York city, the rapid growth of the cities of Yonkers, Mount Vernon and New Rochelle is filling up the intervening open spaces. A great deal of the building development consists of apartment houses, being built to meet a demand for modern housing conveniences in suburban surroundings.

Prominent citizens and county government leaders recognized the fact that prompt action was necessary to acquire vacant land for parks before it was completely built up and prices prohibitive.

LAND ACQUIRED BY NEGOTIATION

In laying out the system a study of the needs of the county was made and followed by a canvass of cheap acreage lands in large single ownerships to simplify negotiations. The commission adopted a policy of acquiring land by negotiations and direct purchase from owners rather than cumbersome condemnation proceedings. Long Island shore front property has become very valuable and is almost entirely in private ownerships, largely excluding the public from access to the water. After considerable study the commission recommended the acquisition of an undeveloped beach at Manursing Island, the estimated cost of 160 acres of land being $600,000. A striking contrast of the value of shore-front property developed for amusement resort purposes is presented by the recently authorized acquisition of 54 acres at Rye Beach, adjoining Manursing Island, at an estimated cost of $2,500,000. The latter property will, however, be self-sustaining from revenues which the park commission will derive from bathhouses, amusements, and concessions.

Another water-front park on the Long Island Sound shore is at Glen Island, formerly a summer resort widely known, but now a public park owned by Westchester county.

Along the Hudson River, shore property is less valuable and there was a wider range of choice of park locations. Parks have been acquired at Crugers near Peekskill, at Croton Point and at Kingsland Point.

The interior parks include Mohansic Park in the northern part of the county, and consisting of 1,100 acres of splendid fields and woodland conveyed to Westchester county by the state of New York for $1. Mohansic Lake, more than a mile long, lies near the center of the reservation, and an 18-hole public golf course will be opened early this summer.

Tibbetts Brook Park of 424 acres will afford ball fields, playgrounds, boating and swimming lakes in the city of Yonkers just north of Van Cortlandt Park in New York city. The Tibbetts Brook Park also forms a section of the Saw Mill River Parkway which also has another expanded area of about 200 acres at Woodlands Lake near Ardsley.

Other interior parks include Saxon Woods Park, a forest tract of 820 acres, between Mamaroneck and Scarsdale; Silver Lake Park of 491 acres at White Plains, and at Poundridge a great forest preserve of 3,000 acres.

PUBLIC SENTIMENT INFLUENCED BY BRONX RIVER PARKWAY

The Bronx River Parkway, 15 miles long from Bronx Park in New York city to Kensico Dam in Westchester county, was an important factor in enlisting public interest in the new Westchester county park system. This project originated as a remedy for the drainage problem presented by the Bronx River and was a joint undertaking between New York city and Westchester county to eliminate sewage pollution and nuisance conditions. The 40-foot paved motor driveway throughout its length is now open to traffic, with the exception of two small gaps now being bridged at Scarsdale and Valhalla, the official date of completion being fixed by law as December 31, 1925.

The successful carrying through of this work strongly influenced public sentiment in favor of additional parkways, and the new county system includes the Saw Mill River, Sprain Brook, Hutchinson River, Mamaroneck River, and Croton River parkways, also the Cross-County, and Pelham-Port Chester Parkways.

Rapid progress has been made in the acquisition of lands for these various projects. Park boundaries have been adjusted to include swampy lowlands, rough, rocky hillsides and lands in a backward condition either by reason of physical characteristics, location or other reasons. Improved property has only been acquired where unavoidably necessary for a right of way, and forms a small percentage of the total area.

On the most important projects the park commission has generally been able to obtain an option on a tract forming the nucleus of the project before requesting authorization by the board of supervisors. Negotiations were then taken up with owners of smaller subsidiary parcels of land desirable but not necessarily vital to the project, and therefore only purchased if the price was reasonable.

Following this method of direct negotiation and purchase from owners, it is believed that a record has been established in land acquisition with businesslike dispatch rather than the outworn, wasteful method of condemnation proceedings.

REGIONAL PLANNING IN A SENSE

While primarily a park system, the whole scheme has the much broader aspect of a large-scale planning project, particularly for the area of about 125 square miles lying between Tarrytown and the New York city boundary. The park system of open areas, recreational spaces, and parkways combining motor traffic and trunk sewer routes, constitute the principal elements of a large-scale plan to which detailed street systems and local community developments will find adjustment. The various Westchester county cities and villages are now connected in a more or less disjointed manner by existing highways. The park commission is providing main through arteries interconnected to form circuits for efficient traffic movement, but a great deal of secondary planning remains to be done by local authorities. In this connection the need is being felt for some central authority to co-ordinate properly new street systems of real estate subdivision, for which there is now no control.

Westchester county's park system has attracted widespread attention by reason of its magnitude and the rapidity of its progress. Visitors to Westchester from various parts of the country, in some instances, report discouragingly on their efforts to get public support for park and planning projects in municipalities where need and opportunity both are obvious.

There are, of course, various city and suburban park systems in the country that were started many years before the Westchester county system. Its principal distinctions are the richness of opportunities afforded by great natural advantages of location and rapidity of accomplishment after getting started.

MOVEMENT 25 YEARS OLD

The present rapid movement has a long background of slow progress. As far back as 1900, a water-front park at Rye Beach was projected, but voted down by the board of supervisors.

The Bronx River Parkway project had a still earlier origin, a commission having been appointed in 1895 to investigate the Bronx River valley drainage problem. No action was taken, however, until 1907, when the enactment creating the Bronx River Parkway Reservation was passed. New York city, which derives the principal benefit, withheld approval until 1913. The World War and the litigation to compel New York to furnish its share of appropriations delayed completion until 1925. During this period, however, public sentiment in favor of parks and parkways was steadily growing.

Underlying Westchester county's accomplishment is a foundation of honest and efficient county government, all the more notable because it is only held together by the loosely articulated framework of a charter admittedly antiquated. A revised charter adapted to the complex demands of modern conditions is to be voted on by the people this year. But without waiting for this better governmental machinery, the park program has received strong public support based on confidence won through a long record of able administration through responsible party organization.

The park system is financed through county 45-year park bonds maturing yearly. The bonds are an obligation of the whole county and there are no local assessments. The expenditure of the total appropriations of $21,798,000 will be distributed through several years.

The total of taxable assessed real estate valuations of Westchester county is about $900,000,000. When the park program started in 1923 the bonded indebtedness of the county was about $12,000,000 against an allowable debt limit of about $90,000,000.

THE REGION, A NEW GOVERNMENTAL UNIT[1]

THE PROBLEM OF METROPOLITAN AREAS

BY THOMAS H. REED
University of Michigan

"It will not do to assume that arterial highways are planned but that government just happens." :: :: :: :: :: :: ::

PLANS must not only be made but executed. Great as are the difficulties in the way of carrying out a plan which affects but one city, they are as nothing to those which dog the path of the regional plan of a metropolis. It is proper, therefore, that we should consider not only the matter of organization for metropolitan plan making but of the organization of the metropolis for plan execution. Consistent and comprehensive results cannot ordinarily be expected from the mere voluntary co-operation of the authorities concerned. It is easy enough to understand why the directors of the "Plan of New York and Its Evirons" pin their faith to voluntary co-operation. They have nothing else to pin to. The proposal to unite in any formal way the parts of three states which fall within the metropolitan area of New York would arouse suspicions and antagonisms enough to lose the battle before it is begun. Under such circumstances it is clearly the part of wisdom to preach voluntary co-operation. Given an intelligently directed and adequately supported planning agency to stimulate the multitude of diverse authorities to action, great things may be thus accomplished. In general, however, to rely on voluntary co-operation is to surrender all hope of substantial success.

[1] A paper read at the International Conference on City Planning, New York, April, 1925.

NO SOLUTION SATISFACTORY AS YET

The objects of metropolitan organization are: first, to secure the execution of a uniform policy or plan with regard to that group of services properly supplied by local rather than by state or national enterprise and yet of interest to the whole metropolis; and second, to achieve an equitable adjustment of financial burdens between the various portions of the metropolitan community. A metropolis, however, is not an assemblage of individuals so much as a collection of communities in which individuals are already assembled. To these communities attach a complex of pride, prejudice and affection which give rise to what our Belgian friends call "esprit de clocher." Political scientists have long realized the error of ignoring the people's natural emotional responses, however irrational they may appear. No opportunity should be neglected for employing the sentiment of local patriotism in the service of local government. Metropolitan organization, therefore, must not fly in the face of the traditions and habits of the people, but must leave in existence, to the greatest extent possible, the customary units of local government.

A variety of attempts have been made to solve the metropoitan problem. None of them have satisfactorily solved it. We must seek a new method. To

begin with, dependence cannot be placed on the enlargement of city boundaries to cover the metropolitan area. The process of annexation has always lagged far behind the spread of population. Take Brussels as an extreme example, with 215,145 people in the city of Brussels and 593,188 in the fourteen neighboring communes. Take Boston, with 748,060 inside the city, and 1,054,260 in a ten-mile zone outside. Paris made her last annexations in 1860, and approximately a third of the population of metropolitan Paris now dwell in the *banlieu*. The present boundaries of the administrative county of London were fixed in 1855 and 3,000,000 people now dwell in the outer ring. Large-scale attempts to solve the metropolitan problem have usually been accompanied by recognition of the identity of existing units—some of them by genuine municipal federalism. The proposition of further municipal expansion, however, even so qualified arouses increasing opposition.

Cities grow after the manner of the forest. Around the parent tree a grove springs up, but seed are also borne afield, and some falling in favored spots sprout into new groves which grows with the first until all are merged in one spreading forest. When outlying centers of population have long enjoyed an individual life that strange spirit, civic pride, breathes through them. They cling determinedly to their individuality, and almost always resist annexation under any guise. The longer they have stood alone, the stouter their resistance. Recently a Royal Commission on London Government listened to the proposals of the London county council for a new central authority in London coextensive with the built-up area and a reasonable margin for development. Within this territory it was proposed to retain local authorities with powers somewhat enlarged over those of the metropolitan boroughs. The county council's proposals were opposed by the representatives of practically every other local government authority in Greater London. There may be a suspicion that these county-councilors, borough-councilors, town clerks, etc., were talking up their own personal influence rather than voicing the views of their constituents. My good friend, Maurice Vauthier, scholar and statesman of Brussels, has written me, anent a similar situation, of politicians "dont l'ambition s'accommode assez bien de la multiplication des mandats municipaux." Nevertheless, the unanimity of the opposition and its frank and thoroughgoing expression could hardly have existed in the face of a contrary public opinion. The creation in 1920 of a Greater Berlin, which by the way embraces an area less than half that of the Metropolitan Police District of London and only slightly larger than that of New York city, might seem to contradict my general statement. It is, however, explicable by the pressure of post-war conditions and a stronger habit of submission to state authority than exists in the English-speaking countries. Furthermore, the legal creation of Greater Berlin dragged along a good quarter of century behind Greater Berlin as a fact.

A LIMIT TO BIGNESS

A growing conviction exists that there is a limit to successful bigness. Once a size has been attained, at half a million, or a million, where the substantial economies of large-scale purchasing and organization have been reached, further bigness only hampers administration. A great city loses in the increasing impersonality of all its efforts more than it gains by the large scale of its operations. As a means of enlisting popular interest in government, great size is equally a failure. In the swol-

len metropolis the individual is lost and knows it. There was a time when men could be induced to give up local independence and vote for annexation to a big city so that they might say, "I am a New Yorker." To-day they seem to prefer to say, "I am a citzen of Bronxville." The growing army of suburbanites have forsaken the great city because they deliberately prefer the life of the smaller community. They can scarcely be expected to welcome reabsorption into the mass they have tried to escape. The day when the metropolitan problem could be solved by annexation is past.

It is easy in the perplexities of the metropolitan problem to turn to the supreme authority of the state for relief. In the centralized states of Europe, and, to a less extent in England, there is no doubt that some of the conflicts of interest characteristic of metropolitan conditions are smoothed away by the interposition of some department of the central government. I have no disposition to question the beneficent results of thus stimulating the co-operation of neighboring communities. It may prove especially effective where the machinery of common action, like the joint committees of the English planning act or the *syndicats* of communes provided by the French Code Municipalare at hand. There is, however, no administrative tutelage of local government in the United States, nor is likely soon to be.

Quite different is that species of state interference which puts in the hands of state officers or boards the performance within a metropolitan area of functions normally entrusted to local control. Such a unit as the metropolitan police district of London is to be justified as a national necessity not as an expedient for ordinary police administration. The metropolitan district commission in Massachusetts which provides parks, water supply, main sewers and more recently regional planning in the metropolitan area of Boston, is, it is true, appointed by the governor and has, nevertheless, found genuine popular support. Perhaps this is to be explained by the fact that nearly half the population and a decided preponderance of the leadership of Massachusetts is to be found within the district. There are a few other examples of such authorities, such as the Passiac Valley sewerage commission, Milwaukee metropolitan sewerage commission and some port authorities, but there is no likelihood of the general adoption of this method of metropolitan government. It is too distinct a violation of the principle of home rule to be acceptable to the public. It means that the government of the district is not responsible to the people who support it with their taxes. Nor is it any more acceptable to the political scientist. We have discovered no other way of qualifying a community for self-goverment than by allowing it to govern itself. To remove from local control governmental services in their nature of local interest, is to weaken the self-governing capacity of the community. We must reject, therefore, direct state administration of metropolitan affairs as a general solution of the metropolitan problem.

AD HOC AUTHORITIES

In the absence of a comprehensive plan for dealing with the problems of the metropolis frequent resort has been had to *ad hoc* authorities. Apart from the perfectly obvious objection that only a flock of such authorities could give us the general solution we seek, they are usually open to attack on more specific grounds. Where the governing body of an *ad hoc* metropolitan authority is made up of represent-

atives chosen by the cities concerned, it almost inevitably becomes unwieldy and thereby incapable of vigorous and responsible administration of complicated and difficult affairs. The metropolitan water board of London, for example, consists of 66 members representing the London county council, the city corporation, the county councils of the neighboring counties and numerous county-borough, borough and urban-district councils. Its accomplishments have been sufficiently satisfactory, but its best friends admit it is too large, that it is fortunate in having nothing more complicated to administer than a going water service. There is also an unfortunate irresponsibility on the part of such an indirectly selected body, a difficulty that increases with the size of the body and the number of units of local government represented.

Where, on the other hand, the governing body is selected directly by the people it is objected that elections, already too frequent, are unduly multiplied. If there were to be several such authorities, as there must be, completely to solve the problem of metropolitan government, this objection would become overwhelming. It is almost impossible to induce the public to interest itself in local elections now. We cannot afford to diffuse further an interest already so attenuated. I would not be understood to condemn the establishment of particular *ad hoc* metropolitan authorities. The gravest reasons have usually prompted their creation. The rapid increase in their number in the last few years is our best evidence of the reality of the metropolitan problem. Many of them, among which may be mentioned the Montreal metropolitan commission, the sanitary district of Chicago, and numerous port authorities, are to be credited with a liberal measure of success. Nevertheless, the fact remains that the creation of *ad hoc* authorities offers no thorough and permanent solution of the metropolitan problem.

A very interesting suggestion for dealing with questions of intercommunal interest has been introduced in the Belgian parliament by the celebrated bourgomaster of Brussels, Adolph Max. I translate freely from a memorandum on the subject drawn up by M. Max and supplied to me through his courtesy:

> An intercommunal council should be instituted for the whole of the Brussels agglomeration to be composed of delegates of the several communal councils and have the duty of legislating upon all matters declared to be of intercommunal interest by the concurrent vote of all the communal councils of the agglomeration.
>
> If communal councils representing at least two thirds of the communes and three quarters at least of the population of the agglomeration pronounce in favor of the submission of a matter to the intercommunal council, the opposition of the minority will be the object of an examination by the permanent deputation of the provincial council (the body charged with the tutelage of communes.) Upon its advice the government may constrain the minority to accept the submission of the matter in dispute to the intercommunal council.
>
> The decisions of the intercommunal council will be sent back not for ratification, but for execution to the communal councils. This execution will be obligatory.

There seems to be no immediate probability of the passage of even this measure, but it is an interesting and ingenious method of getting common action when the demand for such action is supported by an overwhelming majority of the metropolitan community. There is a difficulty in its application in America because of the absence of a state administrative authority endowed with power to pass on such questions. Here the delegation of functions to a metropolitan organization must—unless we change our legal habits—be preordained by law.

A NEW METHOD NECESSARY—THE REGION

It is easy to see that we are forced back upon the original proposition that our need is a new method. But what is that method to be? A political scientist is on solid ground when he points out the defects only too evident in tried devices. He imperils his reputation when he suggests a new device. With diffidence, however, and in the hope that my proposal may at least serve as a starting point for more constructive thought, I propose the creation of a new unit of local government —the *Region*. Its size should vary with conditions. States predominantly rural might well get along without it altogether. It should be centered usually upon some relatively large urban community, and include the territory socially and economically dependent on it, although I would by no means bar such units as the "Niagara Frontier." Regard should be had at the same time to historic origins and sentimental ties. My proposition has nothing in common with the movement for *regionalisme* in France nor with the devolution of parliamentary functions to regional governments as has sometimes been urged in England. G. D. H. Cole, in his *Future of Local Government*, has suggested something of the thought I have in mind, but on a grandiose scale, and with communistic implications which I would emphatically repudiate. The areas I would establish are smaller, more numerous, and more subject to variation than are his. I can see no reason why small *regions* should not center on Albany, Syracuse, and Rochester as well as large ones on New York and Chicago.

My suggestion of the *region* is based upon the commonly neglected fact that the question of metropolitan areas is curiously interrelated with that of efficient areas for rural local government. The cost of the services expected of a rural government have in recent years mounted with extraordinary rapidity. Highways, which in these days pop first into the mind in this connection, are in reality but one item in the swelling total. These increasing costs are, as is well known, wiping out by inexorable economic pressure the small units of rural local government. Parishes, rural communes, town and townships are doomed by their financial incapacity. Even the larger areas such as our American counties are often unable to meet the demands upon them. For years our municipal reformers, their thought centered on urban needs, have been crying "city and county separation." They based their arguments on English practice. For nearly a century it has been a principle of English local government policy to make every city of 50,000 a county-borough, in other words to separate it, governmentally, from the rural area. A like principle at the same time decreed that all the built-up area around a borough should as rapidly as possible—exception being made of London—be included in the borough. These time-honored practices have suffered a check—for under their operation the population and taxpaying capacity of the counties were melting away. We have perhaps been fortunate that our cry for city-county separation from the rural areas around them is only robbing rural Peter to pay urban Paul.

TWO WAYS OF ESCAPE

From this dilemma there are only two avenues of escape: *First*, state subsidies to rural local government, with accompanying state control; *second*, the creation of large areas of local government centering upon and including the cities—*i.e. regions*.

Accepting, for the moment at least,

the latter alternative we have a unit capable of handling

1. Planning, including zoning and the preservation of suitable forest and shore reservations.
2. Transportation, including street railways, buses and rapid transit lines.
3. Traffic, including highway construction and maintenance.
4. Water supply and electric energy.
5. Drainage.
6. Certain aspects of police, health and charity administration.

Such a unit can be effectively governed by a council, say of nine, elected at large by proportional representation, thus minimizing the evil of multiplied local elections. The financial burdens of the *region* can be equitably distributed by the creation of special assessment districts for such small part of its service as is not of direct benefit to the whole *region*. A regional system will not entirely obviate the necessity of state contributions as a means of equalizing local burdens in such matters as education and highway construction. The *region*, however, will be financially competent and will by the performance of the functions entrusted to it give ample relief to the overburdened rural treasuries. Within the *region* the relations of city and county can be readjusted without hardship.

Perhaps of equal importance to the possibility of successful operation is the fact that the creation of the *region* will not arouse the bitter popular opposition which meets every proposal for city growth by annexation. In the first place, it is not a means to the aggrandizement of any city. If, for example, a region were created in the Hudson-Mohawk valleys—centering on Albany it would not change the census standing of Albany, Troy, Schenectady, or any other city. It would affect the existence, dignity and essential independence of none of the existing units of government. The functions entrusted to it would be strictly limited and would leave the lesser units a full complement of powers and duties. They would not be reduced to the unhappy state of London metropolitan boroughs, certainly not to mere election districts like the boroughs of New York. What is proposed is a uniform system applicable throughout a whole state—a systematic grouping of communities with common interests. The fact that it would relieve the financial difficulties of rural areas and small cities, would naturally tend to reconcile them to the surrender of a few functions to the *region*. I make no promises—no one dares promise what the popular response will be to any suggestion—but I hold out these reasonable hopes.

THE REGION AND CITY PLANNERS

The foundation of regional government is being laid, unwittingly almost, by the city planners. They are daily popularizing the idea of the *region*. Prophets of the new and better day, they have "cast off their moorings from the habitable past" and set forth to chart the course of progress. The alluring idea of the regional plan is already accepted by the enlightened and imaginative. The time is coming, however, when you must take deliberate thought of regional government. For without regional government the fabric of your dreams will fray out to tattered fragments. Governing is a matter of infinitely more difficulty, not intellectually but humanly, than planning. Regional planning encounters no more opposition than the propositions of speculative philosophy. Those who understand approve, and those who do not understand remain indifferent. The proposition of regional government, however, at once arouses antagonisms. It is a new political

idea, and many (conservatives and radicals alike) are suspicious of new political ideas. It means the breaking up of vested political interests—some readjustment in party activity, some pruning of the tree of patronage. You will have beautiful regional plans on paper long before you have regional organizations fit to carry them out. The conclusion is inescapable. If it is worth while to plan for streets and parks and terminals, it is worth while to plan for institutions of government. It is the way of specialists to take for granted everything outside their specialty. It will not do, however, to assume that arterial highways may be planned but that government just happens. The one requires and deserves planning as much as the other. Two great mementos the civilization of each age has left to its successors—its structures and its institutions. If there is any difference in the permanence of these memorials it is to the advantage of institutions. Men will be reading the Code of Justinian long after the last three-cornered brick has crumbled from the Pantheon. Let us plan our physical surroundings and our institutions so that they may live on worthily together.

GOVERNMENTAL RESEARCH CONFERENCE NOTES

EDITED BY ARCH MANDEL

Newark Bureau of Research.—Because of the mounting cost of the police service in Newark, N. J., the committee on public welfare of the Chamber of Commerce, through its bureau of research, of which John Blandford is director, made a study of the organization of the Newark police department. The following recommendations, if adopted, will effect an annual saving of $227,000:

Centralization of all detective operations under a single officer. This would affect members of day and night detective bureaus, the auto theft bureau, and plainclothesmen operating in precincts.

Definition more clearly of preventative activities.

Elimination of special details of police to public buildings and municipal departments.

Extension of the motor patrol so that there will be twenty-four such units instead of eight as at present. This also calls for more extensive motorized supervision of patrolmen.

Establishment of the booth system of border patrol, which calls for the erection and maintenance of eight one-man police booths, with telephones, at arterial entrances to the city. Patroling would be done around the entire city by the units operating the booths.

Consolidation of the eight existing police precincts into five.

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Minneapolis Bureau of Municipal Research.—Following up the permanent registration law, which was passed in Minneapolis two years ago, Frank Olson, in co-operation with officials of Minneapolis and St. Paul and with C. P. Herbert of the St. Paul Bureau, drafted amendments to this law, for the purpose of making it more easily workable. The main points covered were:

1. Denying the right of citizens to examine the registration cards which constitute the election register on election day. This was forbidden because such examination constituted an interference with the efficient operation of the elections in former years. The cards were disarranged and election processes slowed up.

2. Removal notices must now be in the hands of the city clerk at least ten days before the date of election. Formerly there was no time limit. This resulted in a jam of calls in the city clerk's office on election day. This year on primary election day, May 11, there were practically no calls because the removal notices had been completely cared for before the day of election.

3. Women whose names have been changed due to marriage or divorce are now required to re-register if such change has taken place since a previous registration. In a number of cases last year election judges tampered with the cards and changed names, which was a serious offense since the original registration was a sworn document. No complaint was made of any person being denied a right to vote on this account in the recent election.

4. The city clerk was given authority to receive from the health commissioner notice as often as every fifteen days of the death of all persons over 21 years of age, which then permitted the city clerk to extract the card of any such deceased person who had been registered. In the two years of the permanent registration law more than two thousand such cases of death were found and under this amendment they were extracted from the live files and put into a transfer file.

Among the criticisms of the permanent registration law, both local and from outside the city, have been the statement that people could impersonate registered voters and thereby defraud properly registered persons of their vote as well as vitiate the election. Although the feeling in Minneapolis is that there is little possibility and no probability of such a fraud being perpetrated, nevertheless, it was deemed wise to make the registration law as nearly fraud-proof as possible. An amendment to the general election law to cover this point was prepared. It provides that the voter when making application for his ballot is required, first, to sign a certificate with his name and address. The election judge then examines the signature on the registration card and compares it with the signature on the certificate, together with the addresses. This is done in case the judge is not personally acquainted with the applicant. A basis for challenging a vote is immediately produced. These certificates are all retained and must tally with the total number of registered cards of those who have voted and with the number of ballots cast. It was thought there might be some complaint, but so far there has been none at all. There are now registered a little short of 190,000 voters in Minneapolis. Another subject of legislation that occupied the attention of the Bureau was the

state re-organization bill. Olson, with the Governor and a member of the interim commission, made a trip to Massachusetts, New York, Pennsylvania and Illinois, for the purpose of obtaining data on existing re-organization measures. The bill, introduced by the committee and passed, was patterned largely upon that of Massachusetts, with the emphasis upon financial control first and consolidation of departments second. The Bureau assisted by obtaining data to support the provisions in the bill, suggesting amendments that would strengthen. The next step is the appointment of commissioners of administration and finance, who will have administration of the measure largely in their control.

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Kansas City Public Service Institute.—Aside from routine work, Walter Matscheck reports that the principal assignment is co-operation with the Kansas City Public Improvement Association in the preparation of a ten-year improvement program. Having effected the change in the form of the city government, the Kansas City Public Service Institute is preparing to enter the county field, leading ultimately, it is hoped, to an entire re-organization of the county government.

⚜

Toronto Bureau of Municipal Research.—The work of the Bureau of Municipal Research has mostly been confined to current matters of interest to the citizens of Toronto. As an example of the sort of activity now being carried on, the following may be of interest. Recently, a motion was passed by the board of control, directing the heads of civic departments to notify the board ten days ahead of vacancies or proposed promotions. The Bureau immediately issued an open letter, pointing out that this could only mean the beginning of patronage. The city council requested the board of control to reconsider and the policy has been abandoned.

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Citizens' Research Institute of Canada.—The Citizens' Research Institute of Canada is now preparing for the annual convention of its Taxation and Civil Service branches, which will be held in London, Ontario, on the 29th and 30th of September and 1st of October.

⚜

Philadelphia Bureau of Municipal Research.—The Philadelphia Bureau has just published an index of Philadelphia ordinances with citations of pertinent city solicitors' opinions and court decisions. Only such ordinances as the Bureau considers of general and current interest are cited in the printed index. For the special, private, and temporary ordinances, the user of the index is referred to the Bureau's more detailed card index completed about a year ago.

An introduction to the index discusses the condition into which the ordinances of Philadelphia have fallen through long neglect. They have never had a comprehensive revision, and as a result, many of them which have never been repealed either by city council or by the state legislature are simply being ignored by city officials. This makes it impossible to obtain through the ordinances an accurate picture of the city government and its operating methods, and caused considerable difficulty in the compilation of the index. The introduction further explains that the index is only a by-product of the Bureau's work on the ordinances and not the goal. The goal is a revision or codification by city council

The index and the introduction are the work of Clarence G. Shenton, assistant director of the bureau. Copies of the index are being distributed free to persons to whom it will be useful, but not to others except under special circumstances.

The Philadelphia Bureau has been engaged with various welfare groups and city officials in an effort to promote more effective public health work and to secure greater co-ordination of the work of public and private health agencies. As part of this effort, an intensive health demonstration, to last for several years, is being planned. Recently, the bureau collected information to assist in determining which district would be the best suited for the demonstration. The project is now in charge of a council, consisting of public officials and representatives of a number of private agencies. The bureau's board of trustees has chosen Charles A. Howland, staff engineer, as its representative on this council.

⚜

Toledo Commission of Publicity and Efficiency.—The Commission of Publicity and Efficiency recently finished a survey of the Toledo fire department, in which it recommended the reduction in the fire fighting force of 58 men by reason of over-manning. This condition came about because of the necessity of maintaining an adequate force while the shifts are absent for their meals three times a day. The report disclosed a high degree of efficiency in the department and recommended a drill instructor, fire prevention

bureau, fire tower, and a new police and fire alarm building, among other things.

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Taxpayers' Association of New Mexico.—The Taxpayers' Association of New Mexico has been in the middle of state and county budget preparation in the past few years. During the last three administrations, Rupert F. Asplund has acted as governor's budget clerk and as secretary of the appropriation committee of the legislature. Although the state has adequate budget laws, it has no budget machinery, but the Taxpayers' Association has made up for this lack by its assistance. Not only were twenty-two counties visited by Mr. Asplund, for the purpose of assisting in the preparation of county and city budgets, but assistance was also given to the state tax commission in the final consideration of these budgets. The report of this organization, published in its April, 1925, bulletin, indicates that it is doing a vigorous and useful piece of work.

National Institute of Public Administration.—At the third annual meeting of the National Conference on the Science of Politics, to be held at Columbia University, September 7–11, 1925, Luther Gulick will be the director of a round table on Municipal Administration. The discussions of this group will be based on surveys prepared by various research bureaus, the following being scheduled for special examination: City surveys—Newark, N. J., Camden, N. J.; Charleston, S. C.; San Francisco, Cal.; Rochester, N. Y.; New Orleans, La.; Montreal, Canada; Cincinnati, Ohio; Lower Merion Township, Pa.

Dr. Gulick is making preparations for a very profitable discussion in his section, and it is hoped that as many research men as possible can attend. This affords not only an excuse, but a real reason for visiting New York.

Paul Studensky, formerly director of the bureau of research of the New Jersey State Chamber of Commerce, has resigned his position to become associated with the National Institute of Public Administration. At present Mr. Studensky is engaged in preparing a Handbook on Pensions in Public Employment.

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Ohio Legislature.—Four recess committees were appointed by the Eighty-Sixth General Assembly of Ohio to study and report on important state problems. The matters to be considered are Taxation, Prisons and Reformatories, Elections and Highways.

It is hoped that Ohio may emerge from its taxation difficulties through the work of the committee on taxation, which was authorized "to investigate the revenues and expenditures of the state and its various local subdivisions and the laws of this state and other states relating to taxation and public expenditure, and to investigate generally in respect to systems and methods of taxation, to the end that economy may be secured in such expenditure, that the divisions of government may be operated within their income, and that taxation be assessed in the most equitable manner effectually reaching all property which should be subject to taxation and avoiding conflicts and duplication of taxation on the same property; and to recommend the legislation necessary to secure such economy and taxation, including, if necessary, such change in the form of local government in this state as may be required."

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The Governmental Research Conference mourns the passing of Robert E. Tracy, who died on April 13 after a brief illness. He was at one time connected with the Philadelphia Bureau and later, director of the bureau of municipal research of the Indianapolis Chamber of Commerce. At the time of his death, he was associated with Fred Gruenberg in the latter's banking institution.

NOTES ON MUNICIPAL ACTIVITIES ABROAD

EDITED BY WILLIAM E. MOSHER

Metropolitan Areas.—The order of the day at the coming International Congress of Cities at Paris next September will be the problem of the metropolitan area or as the French put it, that of *les grandes agglomerations*. Recognizing that the complications due to the differences between administrative areas and the economic and social areas of dwellers in large cities, are practically world wide, the committee on arrangements has appointed M. Henri Sellier, the mayor of Suresnes to serve as the "general reporter" with reference to present practices and helpful suggestions as to the best solution of this and other more pressing problems. In other words, it is planned to make the coming Congress a clearing-house for ideas and a discussion center with references to the metropolitan area.—*Les Sciences Administratives, Nos. 3 and 4, 1925.*

✻

Intermunicipality.—The doctrine of intermunicipality was first given general currency by the fifth Pan American Conference held in Chile in 1923. It was originally advanced by representatives from Habana, Cuba. It led to a formal request that the League of Nations might properly take over the sponsorship of the doctrine.

The program contemplates: (1) interchange of reports among cities of one and the same nation and (2) among cities of different nations. But the scope of the proposed movement goes beyond the broadcasting of municipal reports and statistics. It is thought that better methods of receiving foreign representatives and commissions, of disseminating information as to expositions, educational problems and the like would fall within the scope of the movement.

The Fifth Assembly of the League of Nations acted favorably upon the request and invited the International Union of Cities and the International Congress on the Science of Administration to indicate what had been done along the lines of intermunicipality, what might be done further and finally what the League of Nations might contribute. The International Union invites all of its members to contribute observations and suggestions. To further this latter end it is setting up a series of questions which aim to indicate in what directions suggestions might well be offered.—*Les Sciences Administratives, Nos. 3 and 4, 1925.*

✻

Principles of Public Law.—In reply to an inquiry, the director of the International Union of Cities has noted certain general considerations that ought to be observed in setting up laws governing local authorities. Leaving out those that refer in some detail to Belgium, the following are to be noted:

1. In a political organization of a democratic character the utmost possible power of autonomy should be granted, so that obligations and responsibilities may correspond to rights and powers.
2. The right of initiative is indispensable both in the interest of the progressive evolution of local institutions and in the development of civic spirit.
3. It is dangerous and futile to specify details in the law because of the constant changes in civic institutions.
4. All the above mentioned principles apply to the provincial government as well, particularly with reference to the possibility of free and untrammeled development of inter-community projects, such as suburban growth, lighting, transportation, hospital service, etc. A special provision on this subject was inserted into the Belgian constitution after the war.
5. Small and large cities or commercial units enjoy the same privilege of free initiative except that the administration of small cities is subject to supervision by a district commissioner.—*M. Emile Vinck in Les Sciences Administratives, Nos. 3 and 4, 1925.*

✻

House Construction—Public and Private

England.—Neville Chamberlain summarizes the activities of local authorities and private builders in the matter of housing in the following way:

Twelve months ended March 1, 1925—Under housing acts:

Local authority schemes	
Completed	19,544
Under Construction	24,488
Private enterprise schemes	
Completed	43,223
Under Construction	30,098

Independently private enterprise completed in the 12 month period ending September 30, 1924, 73,032 houses and had 37,218 under construction.—*Local Government News, May*, 1925.

Germany.—A detailed and comprehensive statement covering 201 cities in Germany with an aggregate population of 22½ millions has been published for the fiscal year 1924. The numbers of those that have been constructed or are in process are lumped in these data. The distribution is as follows:

By public authorities	10,052
By co-operative or non-profit making agencies (Gemeinnuetzige Vereimgimgen)	18,823
By private agencies	18,071
Unknown	407

—*Mitteilungen des Deutschen Staedtetages*, 1. *Mai* 1925

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Municipal Propaganda.—The close relationship between municipal welfare and the economic growth and prosperity of any given city has given birth to a wide spread propaganda movement among German cities that is carried on by the municipal administration itself. This is thoroughly organized in the larger cities and placed in the control of special officials who serve as information centers as well as propaganda agents.

The chief type of publicity carried on is in the local, but more particularly in the outside newspapers. Special articles on the various advantages of the city concerned are then circulated in publications that are designed for special occasions, such as fairs, expositions, or for trade journals.

In making an appeal for new industries, descriptions and pictures of harbors, docks, warehouses, railroad connections, open spaces for factory sites, and landing places for aeroplanes are laid before the public in the form of bulletins, folders, or brochures, or full fledged books. The Verein fur Kommunahurrtschaft und Kommunalpolitik has brought out a series of monographs of German cities that illustrate the type of publication just noted. Several of these have been referred to in these notes. They cover all phases of the city's life—geographical advantages, historical background, characteristics of municipal government, but also education, art, recreation, as well as the purely economic peculiarities of the city.

Supplementing the printed word and such illustrative material as may be found in books, and pamphlets, a further means of advertising the city is by means of fairs, expositions, conventions and conferences. Or in case expositions are found in other cities special exhibits are arranged that will call attention to the advantages to be found in the city concerned.

The municipal propaganda also makes use of illuminated signs, films, lectures, plays in the theatre, pageants and other means of entertainment.

The writer summarizes his article by stating that "industry, trade, transportation, propaganda and municipal life have merged in the modern stage of development into a new unit."—*Director Dr. Herbst Erfurt, in Zeitschrift für Kommunalwirtschaft, Vom. 10. Mai 1925.*

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Bavaria under the Home Rule Act of 1919.—In view of the widespread interest in the distribution of power within municipal government, the experience of the cities of Bavaria is worth considering. The contrast between this and the council-manager form of government will be obvious.

A home rule act went into effect in Bavaria in 1919. This resulted in the abolition of the system whereby administration was conducted by the magistrat and control by means of a representative council. The customary practice to-day is for the city council to take entire charge of administration. As an aid to more expeditious administration and to more effective control, the council forms from its own number subsidiary groups of two types: (1) *senates*, and (2) *committees*. In addition it may appoint individuals as advisers or general supervisors. These groups are a characteristic and essential feature of the new government. They will be described, therefore, in some detail.

The senates are independent and continue for the life of the council. To them may be assigned such affairs as do not require express approval on the part of the council or are not subject to the control of the state. The police senate is specially common. The senates are competent to issue orders irrespective of the council. Each senate consists of a number of members of the council, at least five of whom must be present for the conduct of business. Members are usually appointed to the several senates because of special experience or training in the field for which the senate is responsible, as, for instance, a leading industrialist would be

appointed to the branch of the police senate responsible for inspecting working conditions, or a builder to the division of the same senate in charge of administering the building code. Senate meetings are open to the public. This institution has proved to be very satisfactory and has greatly reduced the amount of business to be transacted by the full council.

The committees are most varied. They are subject to the council. They are usually charged with the preliminary investigation and recommendations for action on the part of the council. A central committee or senior committee (*Altestenauschuss*) is accustomed to go over matters not assigned to special committees before consideration in full session. In the larger cities committees such as the following are usually found: committees on utilities, on finance, housing, and personnel. Committee meetings are usually not held in public. It is within the power of the council to assign to a committee the power of final decision and the right to sign vouchers; but these bodies are not independent in any such way as are the senates. Appeal may be taken at any time to the parent body, whereas in the case of appeal against an action of the senate it is necessary to turn to special agencies provided in the law.

A third possible method of exercising control or of working out policies in advance of action by the council is through the appointment of individual councilmen as supervisors or advisers of some division or branch of work. Such agents serve as mediators and interpreters between the executives and the committees or senates of the council. It is their business to see to it that transactions or events of interest to one side or the other are promptly brought to the attention of the proper authority. They are expected not to interfere, but to stimulate. They have, of course, access to all parts of the bureaus assigned to them as well as the records and reports.

It is to be noted that executive officials have the right to vote in the council only in connection with affairs pertaining each to his special division. This contrasts with their earlier unrestricted voting privilege as members of the so-called magistracy.

The reviewer, Dr. Hipp, speaks in most optimistic terms of the success of the single-chamber system, as he terms it. He lists the following advantages:

(1) A much more rapid handling of public affairs.
(2) Increased influence of the technical executives upon the decisions of the city council, and finally
(3) A more intensive acquaintance with the details of current affairs on the part of the members of the council.

He is ready to admit that there is a certain danger in this system in that it is possible for political considerations to bring about hasty conclusions. Careful preparation by committees of the material to be considered seems to him to have obviated this difficulty. It is also granted that there is some danger of over-burdening the individual members of the council. Here again the proper use of small committees and the assignment of details to the regular working force are a means of overcoming this disadvantage. He concludes with the statement that no system is absolutely the final word and probably won't be. The possibility of some further developments in the direction of a different type of organization is dependent, in the opinion of the writer, upon the growth of the influence of special classes of society divided according to callings and finding due representation in connection with such a political body, as has just been described.—*Oberburgermeister, Dr. Hipp, Regensburg, Zeitschrift fur Kommunalwirtschaft, February 25, 1925.*

ITEMS ON MUNICIPAL ENGINEERING

EDITED BY WILLIAM A. BASSETT

Synchronized Traffic Control Increases Street Car Cost.—The establishment of synchronized control over traffic using Euclid Avenue, Cleveland, which includes electric street railway cars, has greatly increased the power and energy consumption demand of these conveyances, according to a statement made by C. M. Ballou, city street railway commissioner of Cleveland. This is an entirely logical result of this method of controlling traffic as all cars operating over that thoroughfare will stop and start at the same time thus creating a peak power demand at frequent intervals. Mr. Ballou further states that, if, as is contemplated, the control system is extended to include other streets over which street car lines operate and traffic over those streets synchronized with that on Euclid Avenue, the demand for power will be increased beyond the capacity of the present facilities and a substantial amount of additional generating equipment will be required.

In Cleveland where the street railway lines are operated on a service-at-cost basis, any arrangement that will cause a material increase in the operating expense of these lines is a matter deserving careful consideration. While synchronized control over street traffic has demonstrated its usefulness under certain conditions it does not necessarily follow that it should prove a panacea of universal application. There would appear to be considerable question as to whether the installation of this method of control on lower Broadway, Manhattan, has actually resulted in improved traffic conditions on that street. The question might also be asked if the application of this method of control on streets with car lines does not result in retarding the operation of these lines? Any means of regulating traffic on the public streets that will tend to reduce the present hazard merits careful attention by all. However, it is important to avoid causing delay to any class of traffic as delay generally means congestion and economic loss. Further developments in the Cleveland situation with respect to this matter will be awaited with interest.

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Motor Toll Highways Proposed in England.—The construction of a system of toll highways designed for motor traffic only and to be financed with private capital, is proposed in a bill to be introduced at this session of Parliament according to the *Municipal Journal and Public Works Engineer*. The bill proposes to confer general powers for the construction of motor highways in various parts of the country, the carrying out of each project being subject to the approval of the minister of transport. The *Municipal Journal* makes the following editorial comment on the proposed scheme:

> Several ingenious arguments are urged on behalf of the project. First, there is the question of safety. The motor way would be fenced, like a railway, and would pass under bridges carrying the cross roads and their traffic. By relieving the existing roads of the motor traffic that now increases their danger as well as enhances their cost, the promoters of the bill maintain that a double service would be given the community —the general public safety would be added to while the local authorities found relief from the charge of road upkeep. Moreover, it is contended that commercial traffic moving without limitation of speed would find the motor way so advantageous that freightage would be diminished with a resultant benefit to trade.
>
> Whatever the action which local government authorities may eventually take with regard to the project, it is certain to encounter strong opposition from the railway companies. If a case is finally established for the motor way, it is difficult to see for what reason it should be operated as a private venture. Users of the motor car are as much a part of the body politic as the humble pedestrian or the cyclist, and, unless there be some special factor touching his case, the roads should be as free to the motorist as to the farmer. On the other hand, if the maintenance of the motor track is so much more costly than the ordinary road that the imposition of tolls, or some form of special payment is justified—and the taxation borne by the motorist supports that view—that fact does not alone warrant the establishment of a monopoly over a convenience fitted for a certain form of locomotion. If the motorist is to be taxed it is surely better for him to pay to a public authority rather than have to bear a levy extracted by a company which he cannot possibly control. In any case he will be taxed, and on the whole it is not so abhorrent to have to pay to a democracy as to be compelled to pay at the dictation of private monopoly.

This proposal indicates that other countries than ours are at present having difficulty in

solving the dual problem of providing highway facilities to meet the demands of motor traffic and the raising of the funds required for these purposes. In this country there is an increasing disposition to make the user of the road pay a substantial part of its cost, both as regards construction and maintenance. This is being accomplished through increased charges for the registration of motor vehicles and the gasoline tax. Moreover, in the case of a number of bridge and tunnel projects designed for vehicular use, both under construction and proposed, it is the intention to collect tolls for the use of these facilities, the revenues thus obtained to be used for the purpose of liquidating the construction cost and providing funds for maintenance. There would probably be little likelihood of favorable consideration being given to any proposal to establish a system of toll roads in this country and in general, the need for recourse to this method of financing this class of improvements would seem to be a remote one. At the same time there are certain undeveloped sections of the country, in which an arrangement of this kind for financing the cost of through roads might offer certain practical advantages.

Seasonal Operation in the Construction Industries.—The economic loss that results to the public from seasonal idleness in the construction industries has long been an accepted fact but that custom and not climate is mainly responsible for these conditions has only recently been appreciated. That much of this loss can be prevented by intelligent cooperation between the public, labor and the various interests identified with the construction industry is one of the conclusions of a committee of the President's Conference on Unemployment which has recently reported on this matter. Secretary Hoover of the United States Department of Commerce, under whose general supervision the committee conducted its work, in a foreword to the report of the committee, comments in part on the significance and value of its accomplishment as follows:

The committee points out that the employment of building trades workers and the use of building materials should be planned with reference to the probable supply and demand for both, and shows how to determine what is the best time of year to start construction or repairs from this point of view. It wastes the money of the customer and the time and energies of the employer and employees when construction work is undertaken with no regard for the recurring periods of extreme activity and idleness. Conscious planning ahead with reference to seasonal conditions is absolutely necessary to mitigate the extreme ups and downs of construction from season to season and from year to year.

Public works are especially well adapted for scheduling with reference to seasonal as well as cyclical conditions, and the efforts to encourage long-range planning of public works deserve the support of the public, legislators, and administrative officials.

The committee attacks the wasteful custom of concentrating leases on a single leasing date, which throws a heavy burden on tenants, landlords, storage warehouse companies, and public utilities, and which should be modified.

The need to eliminate the wastes of seasonal idleness has been brought forcibly to the attention of the construction industries and the public by reason of high labor costs and the failure of the building trades to attract young men into their ranks. Lengthening the building season will mean greater production from the men now engaged in the building trades and will also go far to attract capable apprentices.

It is necessary, first, to develop information as to probable future demands for labor and materials; next, to develop the habit of scheduling construction and repair work with reference to such demands. This means better housing, better working conditions, and economies in building of all sorts. It will be to the advantage of the construction industries, their workers, and the public which now spends in construction work billions of dollars annually.

In summary, the committee has well demonstrated the most important fact that the seasonal character of the construction industries is to a considerable extent a matter of custom and habit, not of climatic necessity. It gives recommendations of practical methods of solution through specified cooperative action of the trades and professions vitally interested in each locality—architects, engineers, bankers, contractors, building-material dealers and producers, real estate men, and building trades labor. No solution is sought or suggested of government regulation. The service of the committee has been to determine the facts and to point a remedy that is consonant with our national conceptions of individual and community initiative. The need is the development of local consideration by these bodies of the problems in each community, with voluntary action to uproot wasteful customs and habits. The service to be rendered to our whole economic life by the elimination of these gigantic wastes and the conscious planning to overcome these irregularities, the improved condition of labor which is possible not only in actual construction but in the material manufacturing industries, the lowered costs of production and of building which could result therefrom, are great warranty for such cooperation.

A summary of the report is issued as a publication of the United States Department of Com-

merce, Elimination of Waste Series, and can be obtained from the Superintendent of Documents, Washington, D. C.

*

Force Account Methods Disapproved by Office of Public Roads.—The application of federal aid to state highway projects in Arizona, to be carried on by day-labor or force-account methods, has been denied by Thomas H. MacDonald, chief of the United States bureau of public roads. In reviewing the situation in Arizona which led to this decision Mr. MacDonald outlines with unusual clarity the essential requirements of sound highway construction policy. His comments on this matter which appeared in a recent issue of the *Engineering News-Record* are in part as follows:

While I believe it is an established general principle that day-labor construction of highways is not economical, it is possible in specific cases that certain conditions, if existing, may justify a state in undertaking to construct a road with its own forces, but in no case is the adoption of the day-labor plan as a general policy justifiable from the standpoint of public policy or economy. In order that the day-labor plan might have a fair trial in Arizona, the bureau concurred with the state in undertaking certain projects on a day-labor basis in 1924.

The question of the continuance of this day-labor or force-account practice has now arisen in connection with the construction of Project 72-B. Bids for this project were opened January 26, 1925. The engineer's basic estimate of cost was $242,318 and of five bids submitted the low bid was $162,612 by Schmidt and Hitchcock and the next lowest bid was $210,196 by Henry Galbraith. The state highway department and the governor verbally requested that the state be allowed to construct the project with day labor instead of awarding the contract to the low bidder. It will be noted that the two contractors submitted bids well below the state engineer's estimate of a fair price, the low bid being $80,000 under the estimate. It may well be questioned whether the low bid was not too low, but there still remains a bid $32,000 under the state's estimate, so that there can be no question that keen competition was had.

In the long run the price that the people of Arizona pay for road work will depend on the maintenance of competition by the contractors, and this in turn depends upon fair and just dealing with the contractors by the state.

In September, 1924, the bureau asked for the installation of a cost accounting system on Arizona 74, but we have not received the actual cost of the projects already under day-labor construction. Regular periodical inspections by the bureau engineers and reports received from these projects convince us, however, that there has already been a considerable loss to the state. There is no financial loss to the federal government for the reason that the state agrees in each instance to undertake construction on a unit cost basis, and consequently the excess cost is an apparent loss to the state. It is believed that the excess cost on these projects already amounts to a very large sum.

It is not, therefore, a question of the bureau's desire to interfere with or harass the Arizona highway department, but rather a question of whether the bureau can become a party to the continuation by the state highway department in respect to federal aid construction, of the policy which involves a higher cost for roads than is necessary. The state highway department concedes that the state is unable to do day-labor work as cheaply as indicated by the proposal of the low bidders on Project 72-B, who secured bond and wished to enter a contract.

Occasionally the idea comes to the surface that federal aid funds are distributed to the states to be used as the state pleases. No more mistaken idea could exist. The federal appropriations are made for the accomplishment of certain specific purposes, and the federal supervision is established to make sure that the funds are devoted to these purposes. This bureau is committed to a program of economy and efficient administration that will not bring under the faintest cloud the expenditure of these funds. No item that will contribute toward the scrupulous efficiency and economy in the construction of the federal aid highway system will be neglected. The bureau has made a major point of economy of operation in its own organization, and expects no less from the states in so far as the expenditure of federal aid funds is involved.

Arizona by its rejections of the very favorable bids, defeated the possibility of going ahead with this project at once. Rejection of these bids was over the protest of this bureau, and this protest was in part based upon the fact that the bureau believes this to be one of the most important projects in the state, and there is no doubt that its completion would have been hastened if a contract had been awarded when bids were received. The state had an opportunity to let a contract for this work on January 26, and had this been done the contractor would no doubt have been on the job now. The bureau refuses any responsibility for the delay.

The bureau does not believe in attempting to secure work at prices lower than are reasonable, but we have already given the day-labor plan proposed by the state a fair trial by concurring in the adoption of the plan on the three projects referred to above and from the best information the bureau has been able to secure the resulting cost of these projects has been so excessive that the bureau refuses to be a party to a continuance of this policy when reasonable bids are received.

NOTES AND EVENTS

The Third Commonwealth Conference under the auspices of Iowa State University was held the last part of June. The general subject was the cost of government. The program was divided into round tables and general sessions. Representatives of numerous universities were in attendance, Glenn Frank, president-elect of the University of Wisconsin, being one of the principal speakers.

A notable feature of the printed program were the sets of queries included, intended to stimulate thought in preparation for the round tables.

✠

Terminable Permits Defeated in Illinois.— Under heavy attack from Chicago and other cities of the state who were unwilling to surrender their present measure of control over public utilities within their borders, the so-called Barr bill permitting a public utility to surrender its franchise and receive back a terminable permit was abandoned, although not until it had given many people a severe fright.

The purposes of the bill were obscure, as well as the interests supporting it. A substitute measure providing for a legislative commission to study the subject of terminable permits and report to the next legislature was adopted.

✠

The So-called Indiana Plan, which gives over to a state commission a large measure of control over municipal and local budgets and borrowings, was defeated in the Minnesota legislature, recently adjourned. The bill developed surprising strength, its proponents coming largely from the membership of the Minneapolis Real Estate Board and the Minnesota Real Estate Association. The Minnesota League of Municipalities strenuously opposed the measure. The principle of home rule versus supervision generated considerable heat, although careful students, irrespective of their attitude in the argument, believed that the bill as drafted was unworkable because of conflicts with existing procedure. Whether the idea of an appeal to an outside reviewing body will prevail yet remains to be determined.

✠

Voting Machines No Civic Gain

To The Editor,

NATIONAL MUNICIPAL REVIEW:

I wish to object as vigorously as possible to the theory that the use of voting machines would be a civic gain. While admitting cheerfully that voting machines may be a very convenient and expeditious means of separating the votes for Tweedledum and the votes for Tweedledee I maintain that voting machines would be a very serious obstacle in the path of electoral reform.

The most encouraging thing in the political field in recent years is the advent of proportional representation based upon the single transferable vote as adopted by Cleveland, Cincinnati and many Canadian cities. Unlike the old style ballot which at best permits the voters to choose the lesser of two evils proportional representation gives all the intelligence there is in the electorate a chance to function and opens up large opportunities for the development of civic leadership.

Voting machines of the kind now on the market cannot be used in P. R. elections. If our cities invest considerable sums in voting machines the argument will undoubtedly be raised whenever a new city charter is being considered that the city cannot afford not to use this investment and therefore should dispense with the advantages of P. R. In a close election this argument might tip the scales on the wrong side.

After the Sacramento P. R. election an active member of the National Municipal League summed up the situation thus: "Better spend a few days if necessary to find out who is elected and be glad than to get the result the next morning and be sorry ever after."

Yours very truly,

CHARLES H. PORTER.

✠

The Nutley Zoning Case

To The Editor,

NATIONAL MUNICIPAL REVIEW:

In the May, 1925, issue of the NATIONAL MUNICIPAL REVIEW Mr. Paul Studensky, the director of research of the New Jersey State Chamber of Commerce, made the following statement:

> It was felt by many friends of zoning that this case was not representative of good zoning inasmuch as the store in question would have been located a considerable distance away from the nearest habitation . . .

Unfortunately, this cannot be used in extenuation of the failure of the New Jersey courts to support zoning, as the actual facts are quite

contrary. There is a logical business zone with several existing stores already in it within a relatively short distance of the proposed store.

While it is true that there are few houses immediately around the proposed store, it surely cannot be the intent of the article to imply that any relatively undeveloped land should necessarily be open to business, regardless to whether it may be needed for that purpose or not. Manifestly a prime use of zoning is to protect undeveloped lots against the harmful use of neighboring property before it is too late.

It is probably fair to state that no carefully worked out zoning map would have located a business zone where the proposed store wished to locate, as it is obviously and essentially a strictly residential neighborhood.

The article also implied that a board of appeals or adjustment might have saved the situation in the Nutley case. Unless a board of adjustment is given the legislative power actually to change the zoning map and create a new business district to include the proposed store, they could have given no relief whatsoever in the Nutley case, or if they had permitted the proposed store in the exclusively residential neighborhood, they would certainly have gone decidedly contrary not only to the letter, but to the spirit of the zoning ordinance.

Aside from these one or two questions, Mr. Studensky's statement is a very clear exposition of the status of zoning in New Jersey.

George B. Ford.
Vice-President, Technical Advisory Corporation.

⚜

Detroit's Financial Program.—A special citizens' committee appointed by Mayor John W. Smith of Detroit to prepare an improvement program covering the next ten years has submitted its report. Richard P. Joy, banker and manufacturer, is chairman and C. E. Rightor of the Detroit Bureau of Governmental Research is a member of the committee.

A capital budget of $445,000,000 was recommended for the next decade. Estimates received from the departments total $780,000,000 so that the report of the committee represents some drastic cuts. It is estimated that the average tax rate for the next ten years, if the recommended program is carried out, will be $20.65 per thousand, assuming that the assessed valuation of the city will increase at least $225,000,000 each year.

Some of the largest items include $63,000,000 for the city plan commission, the bulk of which will be used for street widenings and openings, 75 per cent of the cost of which will be met by special assessments; $142,000,000 for the department of public works to be used largely for sewer construction, a sewage disposal system and for street paving intersections, etc.; and $66,000,000 to the board of education, $50,000,000 of which is to go for new buildings.

An estimate from the rapid transit commission of $267,000,000 was denied, with the exception of $27,900,000 allowed for widening of streets to be occupied by the new rapid transit system. The committee concluded, however, that if the estimate of the transit commission was accepted the tax rates would exceed the $20 per thousand maximum which had been determined upon, and recommended more study of the entire transportation problem.

The work of the committee constitutes a notable example of a city taking thought for the future, a precaution which has been all too rare in American cities in the past.

⚜

The International Police Conference which met in New York in May adopted unamimously the following resolutions relating to the regulation of traffic:

1. No automobile shall be more than 26 feet long, 8 feet wide and 12 feet high.
2. Brakes must be so adjusted that a car making twenty miles an hour can stop within forty feet.
3. All cars must have the left-hand drive.
4. Spotlights must be put out within city limits.
5. The following hand signals should be made universal: Arm extended up for right turn; arm extended horizontally for left turn; arm down to signal intention to stop.
6. The size, shape and color combinations of plates should be standardized.
7. Brakes and steering gears of all vehicles must be tested monthly.
8. The knowledge and fitness of all drivers must be thoroughly tested periodically.
9. The licenses of defective machines should be impounded.
10. Licenses of individuals found unfit should be taken away.
11. The transfer of property titles for automobiles should be regulated by law so that genuine owners may prove their ownership, and so that traffic in stolen automobiles should be discouraged by the impossibility of delivering title.
12. Physical, mental and moral tests should be passed by all drivers.

13. Fingerprints of drivers should be attached to all licenses and deposited with State bureaus.
14. The use of arrows for special traffic signals should be made general.
15. The use of illuminated directional signs should be made general.
16. Speed should be limited to fifteen miles an hour. Villages should not be permitted to restrict speed laws to less than twenty miles an hour.
17. Jail sentences should be given for reckless driving, terms being graduated, in accordance with the degree of recklessness shown, such as two years for driving while intoxicated or under the influence of drugs.
18. The use of glaring headlights should be forbidden.

✠

City-County Consolidation and County Home Rule in Cleveland.—Cuyahoga county and the city of Cleveland, like all metropolitan centers, are wrestling with the problem of a multitude of duplicating political subdivisions and taxing units. The Citizens League submitted a constitutional amendment to the general assembly of Ohio in January which provided for county home rule and granted authority for city-county consolidation and functional co-operation. Under the amendment all of the 93 political subdivisions could, by majority vote of the entire county and more than one-half of the municipalities, be consolidated into one government, or could transfer to the central government those functions of a community-wide nature. This could be done under a charter to be framed by a charter commission elected by the people.

The Metropolitan Council, composed of public officials representing the thirty-three municipalities, opposed a constitutional amendment, but sought to secure the enactment of a so-called "metropolitan district" bill, under which a number of separate functional commissions could be set up, with independent powers, to carry on the various functions for the entire metropolitan area. The Citizens League opposed this bill because of its serious defects and apparent unconstitutionality.

Councilman A. R. Hatton, member of the Metropolitan Council, who had favored the Citizens League's proposed amendment and opposed the council's legislative measure, prepared a brief bill which permits two or more municipalities to enter into an agreement for the joint construction and management of any public utility or improvement.

This compromise measure was enacted into law and seems to satisfy the members of the Metropolitan Council. It does not, however, afford any opportunity to get relief from the duplicating and overlapping political subdivisions in the county which now elect a total of 899 officials every four years. A county home rule amendment passed the senate but died in the rules committee in the house.

MAYO FESLER.

✠

Unexplained Dismissal of Manager of Detroit Street Railways.—Mayor John W. Smith of Detroit has secured the discharge of Ross Schram, general manager of the municipally owned street railways, and I. N. Merritt, secretary of the commission, and observers are keenly interested in learning whether this is a foretaste of manipulation of the properties in the interest of political ambitions.

Mr. Schram had reached the position of general manager through an orderly course of promotion, having served first as secretary of the street railway commission, prior to municipal ownership, then as assistant manager of the original small system, later as assistant manager and acting manager of the consolidated street railways, finally being promoted to the managership upon the death of Manager Goodwin.

Detroit is divided into two antagonistic camps regarding the success of the municipal street railways. Criticism has been made that the tracks are poor, that traffic is congested, that financing has not been porperly conducted and that Mr. Schram, who had had no experience as a street railway manager prior to his engagement by the city, was incompetent. On the other hand many believe that the tracks are in much better condition than ever, that the service is better than under private ownership, that the "pull-ins" are fewer and breaks in wire and delays less frequent. However, when Mayor Smith ran for office last fall, supported by the Hearst newspapers, his platform included the reorganization of the department of street railways and the dismissal of Manager Schram. Following the election, things ran along until the first week in June without any action. At this time, however, the street railway commission was told by the mayor to dismiss both Schram and Merritt. Why Merritt, who had worked his way up from warrant clerk in the old Detroit United Railways, was included in the order it is impossible to determine.

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LAND SUBDIVISIONS AND THE CITY PLAN

By
HERBERT S. SWAN
and
GEORGE W. TUTTLE

A city which has obtained subdivisions which are well designed and which dovetail into each other satisfactorily has taken one of the most substantial steps towards the realization of an efficient and comprehensive plan.

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LAND SUBDIVISIONS AND THE CITY PLAN

BY HERBERT S. SWAN AND GEORGE W. TUTTLE

THE plan of a city, one might almost say, is the collective plan of its numerous subdivisions. A city that has been successful in obtaining subdivisions which are not only in themselves well designed, but which dovetail into and complement each other in a satisfactory manner, has taken one of the most important and substantial steps toward the ultimate realization of an efficient and comprehensive plan. The streets, blocks and lots into which an area is subdivided are the constituent elements of every plan. Whether a city has a well-functioning plan depends upon the organization and relationship of these elements to one another.

Once the land is laid out without consideration to the circulation of traffic or to the ultimate use of the land, irretrievable damage has been done to the future city plan. There is only one way in which a city can secure a satisfactory plan, and that is by having its plan antedate the subdivision and development of its area. Then its territory will be planned right from the very start.

WILDCAT SUBDIVISIONS

The utter disregard of certain subdividers for the interests of the city in the proper planning of vacant areas has in some cities had the effect of making large areas practically unmarketable. The street plan covering hundreds of acres of ground is so involved and complicated that it defies anyone to find his way through the network of streets criss-crossing the area. (See Plate I for typical illustrations of these subdivisions.)

Although some of these subdivisions have been laid out for years, they have enjoyed little real development. Unsuspecting purchasers who have bought in these developments have been more circumspect in constructing homes upon their lots than they were in purchasing them. People will buy lots from high-pressure salesmen or at auction without closely scrutinizing what improvements are provided in the way of sewers, water, gas and such other utilities as are necessary to serve the community. When they come to build a home on one of these lots, they are, however, face to face with a serious problem. They then too often find that they cannot use the lot because it enjoys none of these facilities. The general consequence is that they refuse to improve the lot. In many instances where these lots have been built upon they have been improved with buildings of such flimsy construction that within four or five years of their construction they have been deserted by their occupants. Many of them serve as a blight to the entire community—vacant and falling into decay, with broken windows, leaking roofs, doors ajar, and generally in a most dilapidated condition.

Some of these developments have been purchased by out-of-town companies who have canvassed people in all parts of the country in order to dispose of their lots. Owners of these lots may be found in every state of the union. Some of them have taken a "flier" on a real estate purchase with the hope that the phenomenal rise in Manhattan land values might be duplicated all

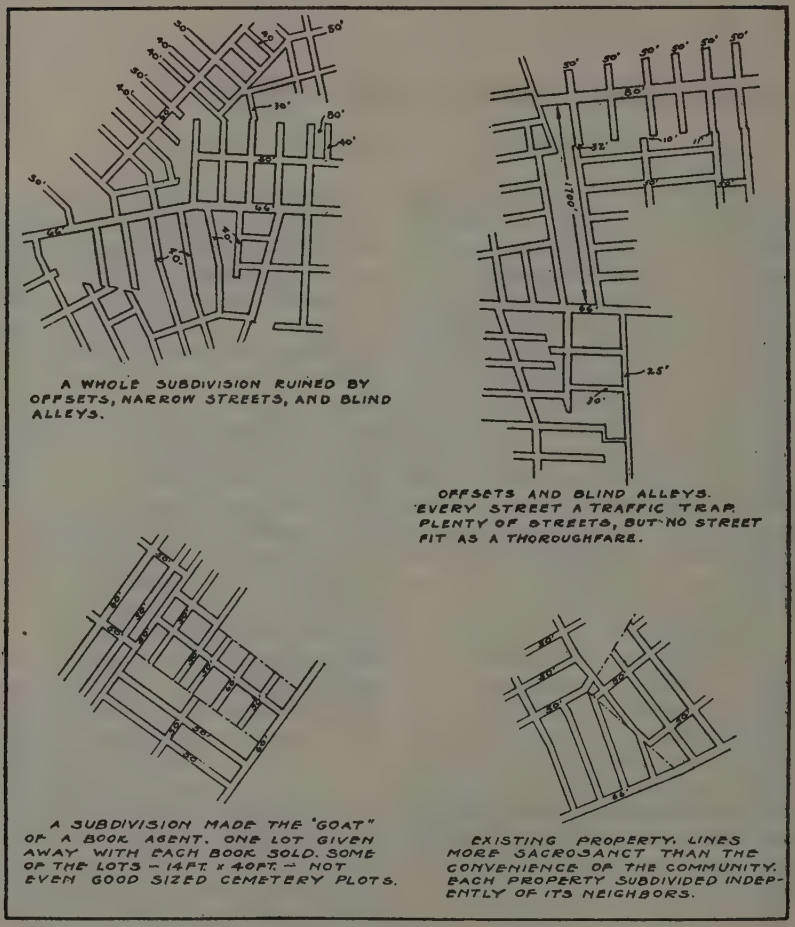
A WHOLE SUBDIVISION RUINED BY OFFSETS, NARROW STREETS, AND BLIND ALLEYS.
OFFSETS AND BLIND ALLEYS. EVERY STREET A TRAFFIC TRAP. PLENTY OF STREETS, BUT NO STREET FIT AS A THOROUGHFARE.
A SUBDIVISION MADE THE "GOAT" OF A BOOK AGENT. ONE LOT GIVEN AWAY WITH EACH BOOK SOLD. SOME OF THE LOTS — 14 FT. × 40 FT. — NOT EVEN GOOD SIZED CEMETERY PLOTS.
EXISTING PROPERTY LINES MORE SACROSANCT THAN THE CONVENIENCE OF THE COMMUNITY. EACH PROPERTY SUBDIVIDED INDEPENDENTLY OF ITS NEIGHBORS.

PLATE I

THE WASTE OF UNPLANNED SUBDIVISIONS

The plan of a city is the collective plan of its numerous subdivisions. If streets, blocks and lots—the constituent elements of every plan—are not properly co-ordinated with one another, a well functioning plan becomes practically impossible.

over again on the outskirts of their own city. Of source, many of these purchasers have, after holding their lots for several years, allowed the community to come into possession of them by neglecting to pay their tax bills. In such cases the owners have probably taken the wisest possible action in getting rid of a bad bargain at as early a date as possible.

For example: More than one-fourth of the area of one large eastern city was for sale a few years ago for unpaid taxes and assessments. Why? Pri-

vate developers had laid out the streets quite without regard to the topography. Not only was the terrain very uneven and rugged, but a thick stratum of solid rock underlay most of it. When the city improved the streets many of the lots were from ten to twenty feet either below or above the street grade. The same dynamite that blasted out the rock blasted away the real estate values. Hence the enormous number of sales for unpaid taxes and assessments.

Barring considerations of expense, the ideal method of approach to the subdivision problem is for the city itself to make an accurate topographical survey of all the land within its present and prospective limits and to lay down a complete plan of both major and minor streets. In this way a well coordinated plan may be obtained, serving all the different interests of the community. This procedure is followed even now by many communities. In New York the city has for over a century directed the character and location not only of the major thoroughfares but of the secondary streets. The same is true of such cities as Baltimore and Philadelphia.

OFFICIAL APPROVAL OF SUBDIVISIONS

The preponderating majority of cities, however, exercise little constructive control over their street plan. In most instances such control as is exercised is limited to the approval or disapproval of plans prepared by the owners themselves.

The power to approve or disapprove proposed subdivisions may be made one of the most effective means of controlling the development of new areas. And yet this power, like every other power, has its limitations. There are some matters of a distinct public interest, which, though desirable in themselves, it would at present seem unwise for administrative officials to insist upon. A comprehensive city plan provides in its ground plan not only for streets and blocks and lots, but for parks, parkways, boulevards, playgrounds, rail and water terminals and public buildings. Some cities in approving subdivisions are even now insisting upon the dedication of 8 or 10 per cent of the area of the land subdivided, for park purposes. In time our city planning powers may be sufficiently extended to permit us not only to insist upon reasonable park areas but to demand appropriate provision for all the features of a comprehensive city plan. That time, however, seems to be some distance in the future.

The writers' ideas as to the length to which a city may reasonably go in controlling subdivisions are presented with considerable detail in the rules and annotations at the end of this article. These rules are based upon the regulations prepared for the planning commission of Stamford, Connecticut. Special acknowledgements are due E. Irvine Rudd, chairman of the Stamford commission, for his kindly and constructive criticism in the preparation of these rules. These rules, when varied to meet local conditions and legal limitations, it is thought, will afford a program for most communities anxious to control their new areas.

In the application of these rules there are, however, certain steps that every city should take. These involve:

1. The adoption of a major thoroughfare plan.
2. The execution of surveys necessary to establish exact location of major thoroughfares.
3. The adoption of subdivisions rules as a guide.
4. The establishment of the policy that all subdivisions must as a

condition precedent to their approval comply with the major thoroughfare plan as well as observe the subdivision rules.

There is no doubt that the possession of the veto power over subdivisions has, where intelligently exercised, been instrumental in securing subdivisions of a superior character. Yet the power of passing upon isolated subdivisions in widely separated sections of the community over a period of years has not resulted in obtaining either the best thoroughfares or the best subdivisions.

MAJOR THOROUGHFARES

The principal reason for this is that the authorities in passing upon isolated subdivisions have usually not had the facility for knowing how the subdivisions in the different parts of the city would, when all of the land was subdivided, tie together to make a harmonious plan of thoroughfares for the entire community. Each subdivision might have its plan modified by the city until it was felt that the subdivision itself met ideal standards, and yet all of the subdivisions taken together might constitute a very unideal plan for the city.

Even though a city may not afford to develop a complete thoroughfare plan for its entire area, it is scarcely an exaggeration to say that no city can afford not to develop a major thoroughfare plan visualizing the traffic requirements of the community when it is two or three times as populous as it is at present. The exact location of secondary streets may in many cities be of comparatively little importance to the well-being of the public, but the location and design of the major thoroughfares are of primary importance to the well-being of the community for all time. These are the streets which link up not only all parts of the community with one another but the community with the outlying communities. These are the streets which carry the bulk of all the traffic. Anything injuriously affecting their continuity or use retards the activities of the entire population. Plate II shows the major thoroughfare plan for Harrisburg, Pennsylvania.

Armed with the power to approve or disapprove proposed subdivisions a city with a major thoroughfare plan is in a position to secure an excellent street plan, even though it may not elect to lay out a complete system of secondary streets. Furthermore, when it approves new subdivisions, it knows that proper provision is made for needed thoroughfares throughout all parts of the city, even though certain portions of its area may not be subdivided for years to come. It secures, moreover, co-ordination between isolated subdivisions without appreciable expense to the community.

MINOR STREETS

Where the topography is fairly level a community with a major thoroughfare plan may permit private developers considerable latitude in laying out secondary streets. But where the land is rugged the community has a distinct interest even in the minor streets. In some sections the topography is so rough that there is danger of securing streets so steep as to be dangerous even for purely local traffic; lots so far above or so far below grade with reference to the streets that unnecessary cutting and filling will have to be resorted to in their development, and streets which make the drainage of the community unnecessarily complicated and expensive.

In Westchester county, astride the Palisades overlooking the Hudson, is a development which, though otherwise attractive, has its sole access over approaches so steep that all the neighbor-

PLATE II

THE MAJOR THOROUGHFARE PLAN OF HARRISBURG, PENNSYLVANIA

Compliance with this plan is a condition precedent to the approval of all land subdivisions.

hood merchants refuse to serve residents during the winter months when there is ice and snow on the ground. Whatever the residents desire, be it groceries, meat or vegetables, they must carry it home themselves,—there are no deliveries. Many a lover of a hillside home, enchanted by the sweeping vistas up and down the Hudson from the tops of these magnificent hills, has in the springtime blithely bought a home. But with the return of spring this selfsame lover of a hillside home, after a winter of slipping and falling down the steep, icy hillside road to his station, has listed his home with a realtor preliminary to purchasing a home on a safer and more accessible thoroughfare.

Streets so steep that cars stall going uphill because the gas won't flow into the carburetor, are as frequently met with in the hill sections of Iowa as Pennsylvania, Washington as New Jersey, Virginia as Massachusetts.

To obviate situations of this character, cities with exceedingly hilly territory should proceed, as means permit and as systematic development demands, with the preparation of complete street plans for their entire area. This work may cover a period of years. It is not intended that all of the vacant land need be immediately mapped; the work should progress in accordance with such demand as there may be for an increase in the subdivide areas of the city, so that each of these areas as it is subdivided will be provided with a street plan, both as to major and minor streets, which is not only best designed to serve the entire community but best conceived for developing the land itself for improvement.

Where topography is comparatively level there is, of course, far less need for such action than is the case with steep hills, rugged bluffs, valleys and ravines cutting up the land. But it goes almost without saying that it is altogether impracticable to control the subdivision of property in very rugged areas by any general rules. Where there is a great variety of topographical conditions, there is only one way to subdivide the land in the way it should be subdivided and that manner presupposes an accurate topographical survey. Indeed, every complete street plan should, before it is permanently laid down and established, be based upon complete engineering data.

SURVEYS

The adoption of a major thoroughfare plan, however, does not need to wait upon the execution of a complete topographical survey. It is altogether possible with the aid of such maps as are available, particularly the tax maps of the city and the United States topographical maps, to develop a major thoroughfare plan based upon a reconnaissance of the territory involved. Field inspections of the ground supplemented by studies of present and future traffic requirements of the district, together with such considerations as the drainage of the land and its future use, will suggest the location and necessity for different thoroughfares as well as their approximate location. Major thoroughfares planned in this manner will show the general location of the traffic arteries subject to minor changes which exact surveys of the routes may suggest.

Many of the proposed thoroughfares may pass over rugged topography. It may be necessary for them to ascend high hills and descend into deep ravines. Yet these thoroughfares may tentatively be laid down upon the city map from an inspection of the ground with the aid of such topographical maps as are available. Obviously, the location of such thoroughfares can be shown only approximately upon the

map. Accurate surveys are indispensable to fit these streets closely to the topography and determine with precision their most economical and satisfactory location. Yet these accurate surveys may, instead of preceding, follow the preparation of the general or skeleton plan of highways.

With a major thoroughfare plan the city is able to concentrate its surveying forces on those routes where the surveys will be of the maximum importance to the location of its basic streets. Much of this work can be done as, if, and when, the need for it arises, but a little ahead of the subdivision of the land itself. This thoroughfare plan will enable the city to concentrate all of its activities in those sections where this work will count for the most; it will also enable the cost of the survey to be spread over a number of years.

In territory that will probably be subdivided in the immediate future, no time should therefore be lost in making exact surveys through the territory traversed, so that the thoroughfares may be located with precision along the best possible routes. Certain sections develop more rapidly than others. It is especially important that the major thoroughfares be laid down in these sections as soon as possible.

PLATTING THOROUGHFARES ON TAX MAPS

When street lines have to be laid down before exact surveys can be made, it will often be sufficient for the town engineer, from an inspection of the ground, to lay down on the tax maps, scale 50 feet to an inch, the lines the streets should follow in order to preserve the intent of the map.

Proposed street lines, as shown on the thoroughfare plan, can readily be transferred to the tax maps if care is taken to follow the intent of the map by preserving the continuity of all streets across intersections. Such a map would be a sufficient guide for property owners to see how the proposed streets affect their property. It will also enable surveyors to locate the streets upon the ground in such a manner as to carry out the intent of the plan. The location of streets by private surveyors should require the supervision and approval of the city engineer to make certain that the intent of the town plan is conscientiously carried out.

The street plan should, of course, be legally accepted and put into effect. All owners are anxious to improve their property in a manner to increase its value. Until an official map is adopted they do not have the facility of improving their property in a way that will make a part of a comprehensive or unified plan. Nor can they develop their land in a manner that will best serve the interests of the community or that will give their property its greatest permanent value.

ENFORCING COMPLIANCE WITH THOROUGHFARE PLAN

Sometimes one can go considerably beyond the mere authorization of the law in securing a desirable platting of vacant areas. The application of subdivision rules to new subdivisions may not always prove effective in the case of obstinate individuals who have no regard for the wishes of the city. But in most instances when such rules are wisely applied it will be found that much better results will be secured than has hitherto been the case. It may be found desirable to supplement such rules with additional requirements of a coercive character to force recalcitrant individuals to comply with the community's plan of development. For instance: Land subdivided without compliance with the major thoroughfare plan of the city might be per-

manently barred from being served by public utilities such as water, sewers, street lights and police, or from having its streets accepted and maintained by the city.

Of course, certain irresponsible subdividers would not even let this daunt them in carrying out their selfish designs. They would proceed to sell off the lots and leave their clients to seek their own redress with the community after the lots had been improved. Yet, refusal on the part of the city to serve subdivisions that had not received its sanction, with water, sewers, etc., would, in most instances, prove efficacious in securing a superior layout.

Nearly all municipalities are very much in need of additional legislation to strengthen their hands in dealing with subdivisions. Where a developer has subdivided his tract without regard to the city plan, it would seem only fair that the prospective buyers of the lots should have some notice of this fact. An effective approach to this problem, provided it were legal, would seem to be for the legislature to pass a law authorizing the city in the case of any property violating the city plan to spread on the records of the county clerk's or county register's office a minute to that effect. Anyone buying a lot in such a subdivision would then buy it knowing that the city would not serve him with either water or sewers, or accept the street in front of his premises,—in other words, that he would be quarantined in perpetual isolation from all of those enjoyments which come from having one's street publicly accepted by the municipality. This notice would be recorded as a lien or mortgage, so that anyone purchasing property would be apprised of the full facts as to the conformity of the property with the city plan when he searched the records for his title. If such a notice as to the conformity or non-conformity of plots to the official city plan were spread upon the records, shyster real estate development companies, it is to be expected, would practically be put out of business.

The difficulty in enforcing a city plan in vacant areas is usually the inadequate control the city has over the development company. When a company has developed a tract, it is now able to dispose of its lots to unsuspecting purchasers who firmly believe that they are buying a lot which they will be able to improve with all of the requisite facilities for urban use. If purchasers in buying lots had this notice, the probabilities are that they would buy only lots that conformed to the city plan.

In the eyes of an unscrupulous developer a lot may be a lot, but the disillusioned purchaser knows full well that there is a difference between lots and lots, that a lot at normal grade equipped with public utilities and situated on a street which is an integral part of a comprehensive thoroughfare plan is not of the same genus as a lot under water, or a lot on top of a clay bank twenty feet above an isolated thirty-foot street.

EXTRA-JURISDICTIONAL CONTROL OVER SUBDIVISIONS

In many states cities have obtained the legislative authority to control the development of the satellite communities that are prone to spring up within three or four miles of the city limits. Among such states are Pennsylvania, Virginia, Ohio, North Carolina and Oregon. In most states, however, cities do not enjoy this power. As a result, there is often absolutely no harmony in the development of two municipalities on opposite sides of a boundary line,—each municipality is supreme within its own jurisdiction. This situation frequently leads to the

most disheartening results, for autonomy in their own affairs is frequently construed by these villages, towns, or boroughs to mean the same thing as license in their development—an utter lack of building codes, no fire limits, no sanitary or health regulations, no restraint in the layout of streets or lots, in a word, no community control over matters of the most profound community interest.

In no respect does this shattering of administrative control, or rather, this abnegation of administrative control, produce more dire consequences than in the subdivision of land into streets and building lots. Bryce spoke in his *American Commonwealth*, over thirty years ago, of our cities as the one conspicuous failure of our democracy. Although it is quite commonly believed that our cities have lived down this imputation during the three decades that have since elapsed, an examination of the street plans of many suburban communities is enough to make one pause and reflect whether our municipal progress has been as great as we think.

The development of a rational street plan is practically hopeless under divided control. The boroughs, towns and villages neighboring a city cannot in the very nature of the case, exercise the scrutiny or the control necessary to secure a logical street plan for the whole urban area. These municipalities may disapprove of bad subdivisions, they may exercise a very desirable negative control over the worst developments, but it takes constructive action to obtain positive results in the way of a convenient and serviceable thoroughfare plan. This initiative must come from the parent community. It is this fact that justifies every city to ask for the necessary legislative authority to control developments within a reasonable distance of its orders.

MUNICIPAL CENTRALIZATION

A policy of extreme decentralization in the chartering of municipal corporations in some states has led to a situation where what should be a single city has been chartered as several separate and distinct municipalities. In many instances it would be difficult to justify these different municipalities as separate wards; to justify them as wholly independent and autonomous cities and villages is simply ludicrous.

As a united urban unit these weak municipalities might constitute a strong city with sufficient wealth and credit to undertake a big, imaginative program of municipal development; as broken fragments of a city they will always remain impotent.

A well-rounded city, it is every day becoming increasingly more clear, should embrace the entire urban area directly tributary to it. Thoroughfares, parks, sewers, water, fire, police and schools are scarcely political problems; their consideration cannot be satisfactorily limited to arbitrary political boundary lines. Yet, with the present multiplicity of satellite municipalities hemming in a city on all sides, these urban problems are studied in a fragmentary manner. Both topography and geography are relegated to a secondary place in the planning of the city's area. Common sense would dictate that engineering problems be solved in an engineering way; that a community, which actually is to all intents and purposes an integral area, be planned as a unit and not as half a dozen broken units.

PLANNING VS. RE-PLANNING

To the developer, the subdivision of land is primarily a matter of profit. He is principally interested in such questions as the number of lots he can carve out of a given area; how quickly

he can dispose of his lots; and how much money he can realize in the aggregate from the sale of his land. His problem is solely a problem of money and of how much money in the shortest time.

To the city, the subdivision of land is a matter of grave public concern affecting its whole future well-being.

An initial mistake in its street layout compels many a city, which might otherwise use gravity, to pump its sewage. Inattention to the important matter of drainage in the original subdivision has cursed thousands of homes with wet cellars. A miserly allotment of building sites forces innumerable families to live in dark and dingy rooms. Traffic congestion, with all of its inexorable toll in the life, limb, time and money of the community is to a very great extent the direct result of improper street planning.

Nearly every city problem is related to its ground plan. It is more often lost sight of than kept in mind, yet the manner in which the city's area is subdivided intimately affects, even though it may not conclusively define, such considerations as the safety and mobility of both its pedestrian and vehicular traffic, the drainage and sewerage of its area, the cost of carrying out public improvements, the density and sparsity of its population, the social environment of its inhabitants, the range of land values, the solvency of its lot owners, and even the stability of its own finances.

So long as a city neglects to control the platting of its new areas in accordance with a comprehensive plan, it neglects its greatest opportunity in constructive city planning. One thing is certain: Just so long as we remain indifferent to the proper planning of our undeveloped areas, we must actively concern ourselves in the re-planning of our built-up areas. One or two active real estate developers may, even though they be the most enlightened and conscientious citizens, if their work is unsupervised, within a few years do more real damage to the plan of a city than the public can, through generations of effort and millions of expenditure, correct. If our city planning is ever to be something more than city patchwork, we must plan our new areas.

RULES FOR THE GUIDANCE OF THE PLANNING COMMISSION IN APPROVING NEW SUBDIVISIONS

1. *Definition of a "Subdivision."*

A subdivision is any change, alteration or rearrangement in the boundary or division lines of a parcel of property or street.

The public control exercised over subdivisions should extend not only to the original subdivision of a tract but to all subsequent changes in the subdivisions affecting the street, block or lot lines. If public supervision were limited to original subdivisions an opportunity would, obviously, present itself to subdividers to effect as changes or modifications in a layout, the very results that the community guarded against in the original platting. Narrow streets, blind streets, steep grades, narrow and diminutive lots are as undesirable and as fraught with anti-social consequences whether obtained in the original subdivision or later through an amendment to the original subdivision. All of these matters are possessed of a very potential, if not present, importance to the well-being of the city. The definition of a subdivision should, therefore, be sufficiently broad to include not only all subdivisions but all changes in street, block or lot lines, which in any way may affect the public health, public morals, public safety or general welfare.

2. *Preliminary Plans*

A preliminary street plan should be submitted to the planning commission

for tentative approval by it before the subdivider proceeds with a final plan.

The preliminary plan shall be on a scale not smaller than 200 feet to an inch and shall show the boundary lines and ownerships of the properties to be subdivided, contours at not greater than 5-foot intervals, water courses, adjacent streets and properties, as well as such other existing features as may be of assistance to the planning commission in passing upon the subdivision. Profiles showing the present and proposed grades of all streets shall be shown to a scale, whenever practicable, of 40 feet horizontal and 4 feet vertical. All elevations must be referred to some permanent bench mark, which must be described; where practicable, city datum is to be used.

A preliminary plan is required as a measure of economy. An engineer in designing a subdivision usually prepares a number of sketches before he succeeds in satisfying himself or his client. It is only when the design is decided on that the complete plans are worked out and the lines and dimensions determined. To prepare a final map before the general design is decided upon would often mean that the time and labor involved would be wasted.

To avoid the waste which would be involved in the possible rejection of a "final map," a preliminary plan is required which, though it need not be elaborate should show all features that will aid the commission to determine the merits or demerits of the plan. In addition to the proposed location of streets in the subdivision, the most important data needed in this respect are: the relation of adjacent streets and property to the subdivision, the location of buildings on the property, the location of water courses, and topography of the land.

As the preliminary plan is for information only, much latitude is allowed the designer in its preparation. It is required, however, that the scale shall not be smaller than 200 feet to an inch for the reason that the necessary information can rarely be shown satisfactorily on a lesser scale. Working profiles of the proposed streets are called for in order to determine whether the street grades and drainage are satisfactory. A uniform scale and datum is desired in order that the profiles can readily be compared with one another.

3. *Street, Sidewalk and Roadway Widths*

Sidewalk and roadway widths shall be as indicated for that width and class of street, on accompanying diagram showing cross-sections of streets, unless the planning commission in a specific case rules otherwise.

No street shall be less than 50 feet in width. Major or traffic streets shall be of the width indicated on the major thoroughfare plan. Sidewalk and roadway widths shall be as indicated for that width and class of street on the accompanying diagram showing cross-sections of streets. An exception may be made by the planning commission in a specific case.

Continuity of direction is a desirable quality in a thoroughfare; so is continuity of width, but desirable as both of these qualities are, private subdivisions guarantee neither. Not only do streets frequently change directions, they also frequently change width. Changes in direction sometimes carry traffic far out of its course; changes in street widths reduce the capacity of through traffic streets to the capacity of their narrowest link.

The major streets should be carefully designed as a system. The proper width of traffic streets in the plan is just as important as the size of a particular pipe in relation to the water or sewer system. It has been designed for its particular function in the system and should not be departed from. Minor or residence streets should be fitted to the local requirements. Where no traffic possibilities are involved and the streets are short, a width of 50 feet will usually meet the requirements, but in no case should the street width be less than the statutory requirement.

Streets should be adapted to the function they are to serve. Roadways as well as sidewalks should be suited to the traffic they are to bear. Needlessly wide roadways in residence streets are expensive to construct. They are also unsatisfactory in appearance. On the other hand, narrow roadways on heavy traffic streets result in danger, congestion and loss of time.

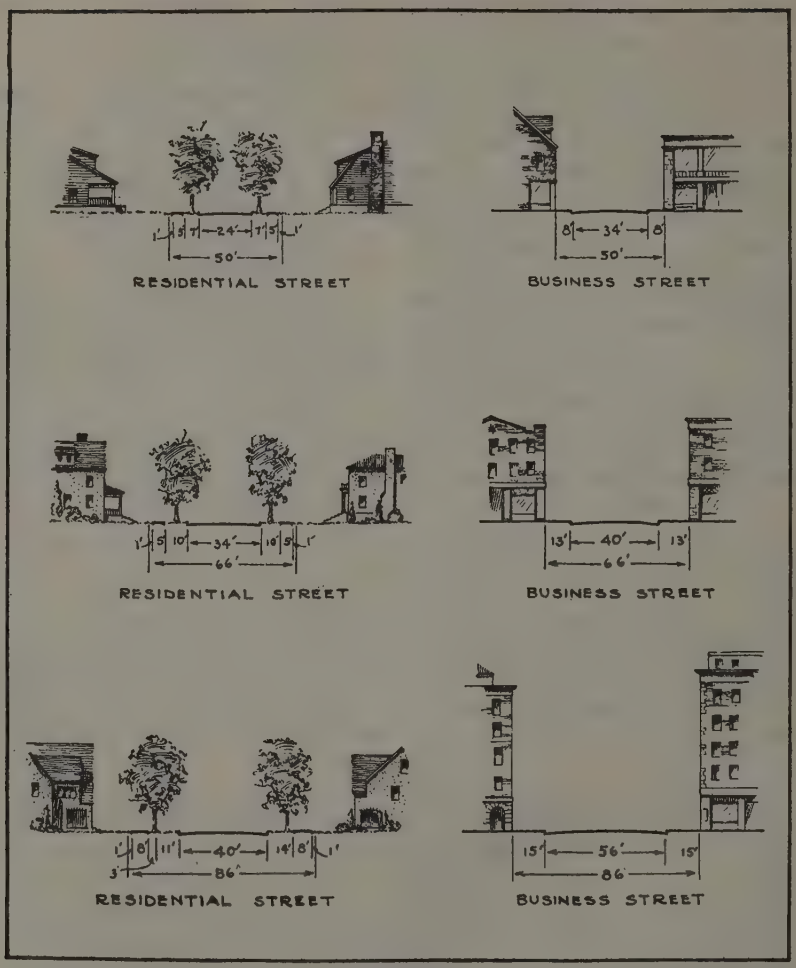

PLATE III

Cross Sections of Streets

The design of a street should be adapted to the volume and character of its expected traffic.

The arrangement of streets should be standardized to a limited number of types which have proved efficient and satisfactory, and which will best meet local conditions. Such standard street cross-sections are shown in the accompanying diagram. It is recognized that very special requirements have to be met in certain cases, which may render the application of a standard cross-section undesirable. The planning commission would rule on the cross-section to be employed in such cases (Plate III).

4. *Block Lengths*

Intersecting streets shall be laid out at such intervals that block lengths are not more than 800 feet, except where

existing conditions justify a variation from this requirement.

Blocks should be limited to a reasonable length. Many existing blocks are entirely too long. It is very inconvenient for a person living near the middle of such a block to reach a corresponding point on a parallel street. Public convenience demands that block lengths should not be excessive.

Many communities at first expand along a single street. Naturally the owners of property along that street are averse to the reduction of their frontage, necessitated by the provision of cross-streets. Consequently, such streets are often infrequent.

If sufficient cross-streets are not provided for in the original plans it becomes increasingly difficult to make proper block lengths as the property is developed. The defect is rarely remedied. Communities will generally suffer permanently the inconvenience and loss due to the lack of cross-streets unless these streets are provided at the start.

5. *Block Widths*

The width of blocks shall normally be not less than 200 feet nor more than 300 feet.

Uncontrolled subdivisions play havoc with the street plan; they are scarcely less disastrous to the block and lot plan. Frequently the blocks are made so narrow that they permit of but a single tier of lots in a block, as the lots run through from street to street. In such cases at least one street—and when houses front alternately on both streets—then both streets are made backyard streets. The cost of providing these through lots with gas, water, sewers, and pavements is double the cost of providing the lots on a two-sided street with similar service. A house facing a garage and flanked on either side by garages, naturally has its value depressed to correspond with its garage environment. But it is not only the sales value of such a home that is depressed, its social, moral and sanitary environment sinks, if anything, below the level reflected by its market value.

A block 200 feet wide can be divided into two tiers of lots, each 100 feet deep; a block 300 feet wide into two tiers of lots, each 150 feet deep.

6. *Continuation of Existing Streets*

New streets shall, as far as it is practicable, be continuations of existing streets. The width of new streets shall not be less than that of existing streets unless the planning commission in a specific case rules otherwise.

The street plans as developed by individual owners without regulation are faulty in many respects, but in no particular are they more prejudicial to the public welfare than in the lack of continuous streets. This fault would be corrected by recognizing existing layouts in the vicinity and continuing the streets already laid out through the new subdivisions. This would tend toward orderliness and method in the development of a street system. Many towns have developed automatically from a single plan by the continuation of existing streets over neighboring properties, as the town expanded. Such expansion has serious faults, but it is very superior to the individual planning so common where vision does not extend beyond the particular property.

Streets should not be throttled for a block or two due to the niggardliness of an individual developer or his desire to obtain deeper lots or more lots. It is therefore required that new streets shall be as wide as the existing streets of which they are continuations.

7. *Streets to Be Carried to Property Line*

When a new subdivision adjoins unsubdivided land susceptible of being subdivided, then the new streets shall be carried to the boundaries of the tract proposed to be subdivided.

In subdividing property in the past it has been quite common for owners to terminate streets which could be continued into neighboring properties, short of the property line. This has prevented neighboring properties from connecting with the streets. To obtain continuous streets through successive subdivisions it is absolutely imperative to carry the streets in each subdivision to the property line. To do less is against both the public interest and the permanent welfare of prospective owners in the subdivision. The practice of stopping streets short of the

property line should be entirely prevented. The rule, therefore, provides that streets shall be continued to the property line.

8. *Dead-End Streets*

Dead-end streets or offsets at street intersections will not be approved where the conditions are such that a through street can be laid out. A turn-around roadway with a minimum radius of 30 feet must be provided at the closed end of all dead-end streets; the customary planting strips and sidewalks on such street shall encircle this turn-around.

There are scores of blind streets in almost every city,—streets which go in but do not come out. In most instances there is no turn-around at the closed end of these streets. The difficulty traffic experiences, even though it may be of a strictly local character, in such streets is evident. These *cul de sacs* are scattered in all parts of the town. In some sections nearly every street is a blind street. The fire hazard of such streets acts as a permanent threat to the whole community.

Free circulation for traffic is a fundamental requirement for present-day streets. Dead-ends in streets are quite as detrimental as they are in service pipes. Both dead-ends and offsets should be eliminated as far as possible from all streets. In rare cases a dead-end cannot be avoided. For that condition the rules provide a turn-around at the end of the street of such size that a motor car can turn while moving forward.

Offsets at street intersections impede traffic so much and are such a source of traffic congestion that large sums have been spent in many cities in cutting off or rounding corners and straightening out crossings. These offsets originate through the independent subdivision of properties on each side of the intersecting street. Often on account of property lines and the size of the lot, an owner finds that a cross-street which does not register with the similar cross-street on the opposite side of the intersecting street will give him more satisfactory lot depths than if he continues that cross-street. He therefore promptly lays out the offset street to the disadvantage of future traffic. Such faults must be corrected at their inception, hence the necessity of this prohibition.

9. *Enlargement of Street Intersections*

No intersecting streets shall be laid out with the angle included between adjoining street lines less than 30° nor greater than 150°.

Street intersections shall be enlarged by the following minimum amounts:

If the angle included between the adjoining street lines is 90°, then these lines shall be joined by a curve of 20 feet radius, the external secant of which is 8.28 feet.

If the angle included between the adjoining street lines is less than 90°, then these lines shall be joined by a curve with a radius of 20 feet, minus 1.6 inches for each degree that the angle is less than 90°.

If the angle included between the adjoining street lines is greater than 90°, then these lines shall be joined by a curve with an external secant of 8.28 feet plus 0.27 feet for each degree that the angle is greater than 90° (Plate IV).

This rule relates to street intersections only. It provides for rounding corners and enlarging the area of street intersections so as to facilitate the turning of traffic into the cross-streets.

Traffic congestion is generally greatest at intersections where the traffic on both streets crosses in the width of one. The capacity of streets is often reduced one-half, and sometimes even more at intersections. It is therefore of the greatest importance to arrange intersections so that traffic will have sufficient room to flow smoothly around corners.

To avoid traffic interferences as well as uneconomical and awkward property subdivisions, street intersections of less than 30° or more than 150° (the supplementary angle) are prohibited.

At right angle intersections the corners are turned with a radius of 20 feet. With sidewalks 10 feet or more in width, cars will have no difficulty in turning close to the curb. The street corner is set back 8.28 feet.

From 90° down to 30° the street corners are rounded with radii decreasing with the angle. The radius of the street corner decreases uniformly for each degree decrease in the angle of

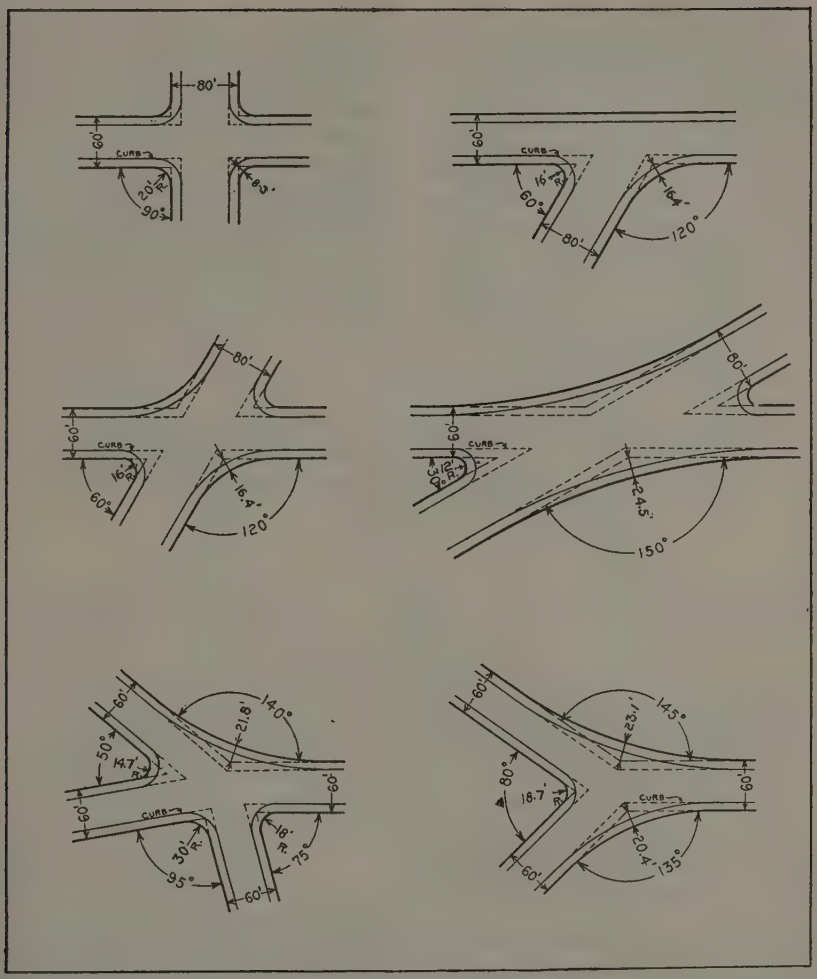

PLATE IV

ARRANGEMENT OF STREET INTERSECTIONS

The arrangement of an intersection has an intimate relationship to the ease, speed and safety of traffic.

intersection until at 30° the radius becomes 12 feet. This allows a width of 24 feet at the corner, which is sufficient frontage for satisfactory development. At the same time the corner is pushed back 34.36 feet and thereby gives the necessary increased room for turning vehicles.

From 90° up to 150° the street corners are rounded with radii increasing with the angle. The setback from the corner increases uniformly for each degree increase in the angle of intersection until at 150° the radius becomes 693.95 feet and the setback 24.48 feet.

10. *Streets Deflecting within the Block*

Street lines within the block deflecting from each other at any one point

more than 10° shall be connected by a curve, the radius of which for the inner street line shall be not less than 350 feet. The outer street line shall be parallel to such inner street line.

When, however, the street deflection within the block might at some future time, in the opinion of the planning commission, become a street intersection, then the deflecting street lines shall be widened on the inside as provided in the rule for "Enlargement of Street Intersections," while the outer street lines shall be defined by straight lines meeting at a common intersection.

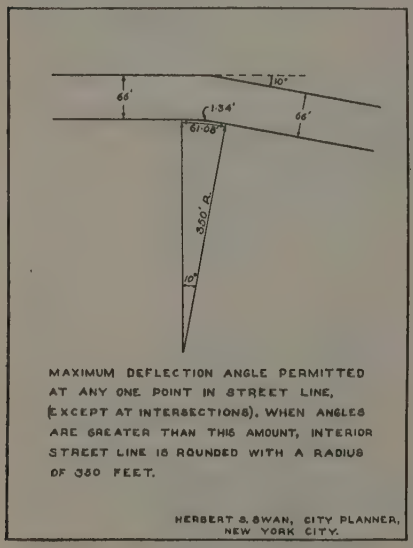
66'
10°
1·34'
66'
61·08'
350' R.
10'
MAXIMUM DEFLECTION ANGLE PERMITTED AT ANY ONE POINT IN STREET LINE, (EXCEPT AT INTERSECTIONS). WHEN ANGLES ARE GREATER THAN THIS AMOUNT, INTERIOR STREET LINE IS ROUNDED WITH A RADIUS OF 350 FEET.
HERBERT S. SWAN, CITY PLANNER, NEW YORK CITY.

FIGURE 1

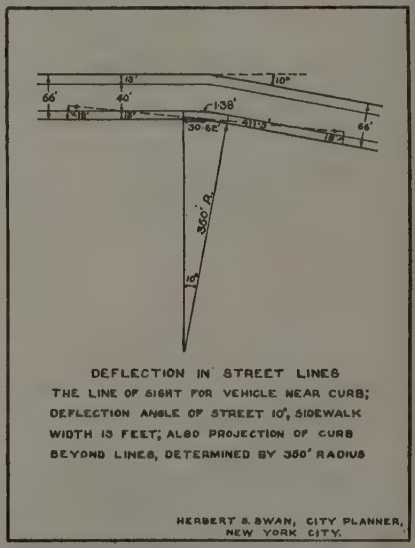
66'
40'
1·38'
30°6E'
350' R.
10'
DEFLECTION IN STREET LINES
THE LINE OF SIGHT FOR VEHICLE NEAR CURB; DEFLECTION ANGLE OF STREET 10°, SIDEWALK WIDTH 13 FEET; ALSO PROJECTION OF CURB BEYOND LINES, DETERMINED BY 350' RADIUS
HERBERT S. SWAN, CITY PLANNER, NEW YORK CITY.

FIGURE 2

Streets should not turn so abruptly as to impede traffic, neither should they be a source of inconvenience or danger to motorists. Curves with a radius of 350 feet and more have proven satisfactory. When the street itself is free from obstruction to vision, even if it is curving around a hill or is built up to the street line, a radius of 350 feet on the interior side of the street will enable the driver of an automobile to see an obstruction near the curb about 207 feet ahead. This is a sufficient distance for a car to stop in when going 38.5 miles per hour. Two cars approaching each other have time to stop and avoid collision within this distance when going at a speed of 26.7 miles per hour. The car in the vehicle line next the curb can travel at 32 miles per hour without discomfort to passengers or danger of skidding.

Angles in streets are a considerable source of danger and obstruction to fast traffic. Where deflections in the street are limited to 16° the chauffeur can see 213 feet ahead, but the projection of the inside curb line interferes with the easy turning of the corner by machines near the curb. With a deflection of 10°, however, the change in direction is not so great as to cause discomfort in driving, and the vision is clear for a considerable distance ahead. The curb then projects but 1.4 feet beyond its position on a curve of 350 feet radius, and the car need swerve only 1.4 feet out of its course around such a curb (Figs. 1 and 2).

The street deflection may be so located with reference to adjoining unsubdivided property susceptible of being subdivided that the planning commission would wish to treat the deflection in such manner as to allow a future street to intersect in the deflection, or else it might be desirable to prolong the deflecting street in one or both

directions. Therefore, the deflecting street lines should be laid out originally so as to cause the least disturbance to the street and lot lines possible. Consequently the interior street lines are widened according to the rule for "Enlargement of Street Intersections," as though an intersection existed, due to the entrance of a street at the exterior side. The original exterior straight street lines meeting at a common angle point are retained as the exterior side lines of the street (Fig. 3).

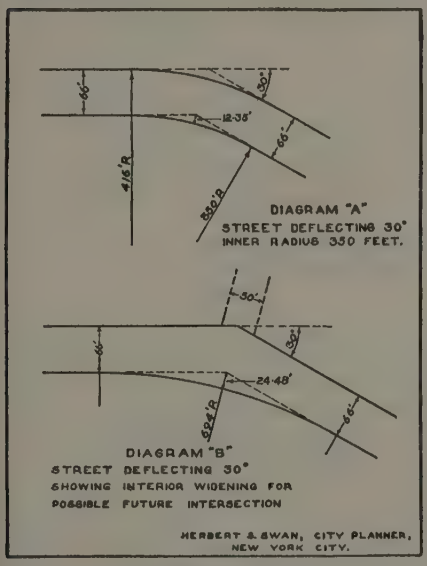

FIGURE 3

11. *Widening of Streets at Curves*

On major thoroughfares, the street shall be widened at curves, if required by the planning commission. The widening shall be wholly inside the inner street line.

Should the street lines deflect through an angle of 15° or more and turn more abruptly than by a curve of 1,000 feet radius, the street shall be widened in accordance with the following formula:

$$E = 3WA\ (1000 - R) + 1000R$$ to the nearest foot

where E is the widening at the bisector of the central angle in feet;

W is the width of street in feet;

R is the radius in feet of inner street line, not less than 350 feet;

A is the central angle of the curve in degrees, but if more than 45° it shall be taken as 45° in the formula.

When the street deflects 30° or less the street shall be widened at the bisector of the central angle the given amount and connected into the side lines of the street by a circular arc tangent thereto. When the street deflects more than 30° the street shall be widened the amount given by the formula, on each side of the bisector of the central angle through an angle of one-half the total deflection angle less 15°. The widened portion of the inner street line shall be joined to the side line of the street at each end by circular curves to which these lines are tangent.

Motor cars cannot be kept as closely in position when rounding a curve as when moving on a straight line, nor can the path of neighboring machines be as accurately gauged and allowed for as on a straight roadway. The width occupied by a vehicle is, moreover, greater than on a straight right-of-way. All of these reasons make additional clearances necessary for safe operation around curves. This additional clearance becomes larger as the curved path diminishes in radius.

A car can travel around a curve having a radius of 1,000 feet at 52.8 miles per hour without discomfort or danger from centrifugal force. The curvature in this case is so gradual that at reasonable speeds no widening is necessary and is not required by the rule.

On the other hand, with a radius of 350 feet, the least radius permitted, a speed of 32 miles per hour around the curve is the greatest that can be used with comfort and safety. The curvature is so considerable that for deflections exceeding 15°, which corresponds to a length along the curve of 92 feet, a substantial widening is necessary to give the clearances demanded for satisfactory and safe operation of motor cars. The rule increases the width of the street by about one-quarter its normal amount on the inside of the curve when the radius is 350 feet and the deflection is 45° or greater. This widen-

ing is gradually reduced as the radius is increased to 1,000 feet. The outside line of the street following the rule laid down in the previous paragraph is not changed by the widening which is wholly on the inside. The change from normal width to the fully widened central portion of the curve is effected gradually by an arc of a circle which is tangent both to the straight portion of the street and the curve defining the inner side line of the street after widening. The alignment of both interior and exterior side lines of the street are therefore perfectly smooth and regular.

The formula for the street widening is derived from the following considerations.

The clearances required by motor vehicles in rounding curves and the necessary increase in the width of roadway carrying a given amount of traffic is evidently some function of the curvature, that is, $1/R$, which should become zero when the radius is 1,000 feet. To make the expression as simple as possible, we make the widening proportional to $1/R-1/1000$.

The necessity for street widening is not apparent when the curve is short and the road can be seen some distance ahead. The need for widening increases in importance as the deflection becomes greater. After traveling on the curve for a certain length, however, the motor car becomes adjusted to the curve and no further widening is necessary whatever its length may be. The widening should, therefore, be proportional to the deflection angle of the curve up to a certain amount. It is important to fix the correct amount of widening on the sharpest curve, that is, one of 350 feet radius. If the widening for such a curve is fixed satisfactorily, no difficulty will be encountered with curves of longer radii. On a curve of 350 feet radius up to an arc of 15° corresponding to a length along the curve of 92 feet, no widening is necessary (Fig. 4). When an arc of 45° is reached, corresponding to a curve length of 275 feet, the motor vehicle is adjusted to the curve and no further widening is required no matter how long the curve is.

A street 66 feet wide with 4 traffic lines should be widened about 17 feet on a curve of 350 feet radius, in order to enable traffic to move as freely and with the same clearance as on a straight line.

A formula for widening which will meet the requirement is $E=WAn\ \frac{(1-1/1000)}{R}$ where n is a constant to be determined. For a radius R of 350 feet, a street width W of 66 feet and a central angle A of 45°, we have found E the required street widening should equal 17. We have, therefore,

$$17=66.45\ n\ (1/350-1/1000) \text{ and } n=3.08.$$

The formula becomes E 3.18 WA (1/R−1/1000) which we simplify for use as follows:

$$E=3WA\ (1000-R\div 1000\ R.$$

When the street reflects 15° the curve widening begins and from that angle up to and including

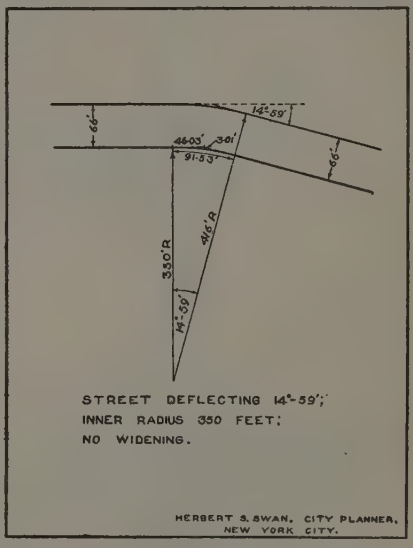

FIGURE 4

30° the street is widened the full amount only at the middle point of the curve. The interior side line is that arc of a circle tangent to the side lines of the street, which gives the proper amount of widening at the middle point; its radius is $\frac{R+E\ \text{Cos}\ a}{1-\text{Cos}\ a}$ (where a is half the deflection of the street). The street gradually widens beginning before the original curve is reached and continues to widen up to the middle point of the curve, after which it gradually contracts. The outer street line, not changed by the widening, is a circular curve tangent at its ends to the street, while the inner street line as widened is also a single circular curve tangent at its ends to the street line, but struck from a new center further away from the street (Fig. 5).

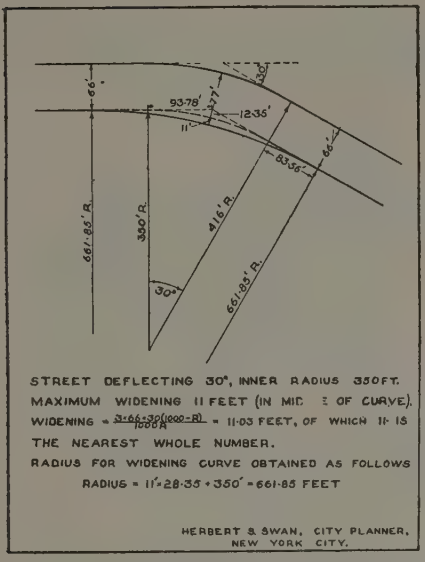
66'
93.78'
11'
12.35'
83.35'
661.85' R.
350' R.
416' R.
661.85' R.
30°
STREET DEFLECTING 30°, INNER RADIUS 350FT.
MAXIMUM WIDENING 11 FEET (IN MIDDLE OF CURVE).
WIDENING = 3×66×30/1000R (1000−R) = 11.03 FEET, OF WHICH IT IS THE NEAREST WHOLE NUMBER.
RADIUS FOR WIDENING CURVE OBTAINED AS FOLLOWS
RADIUS = 11'×28.35+350' = 661.85 FEET
HERBERT S. SWAN, CITY PLANNER, NEW YORK CITY.

FIGURE 5

When streets deflect more than 30° the central portion of the curve is widened a constant amount. A gradual widening of the street commences as in the previous case before the curve is reached, continuing up to an angle of deflection of 15°, after which the widening is uniform to a point 15° from the end of the curve when the street width contracts in the same way as it expands on approach (Fig. 6).

The radius of the inner street line of the widened central portion is $R-E$; and the radius of the end curves connecting to the street tangents is $R+\frac{E \text{ Cos } 15°}{1-\text{Cos } 15°}$ or approximately $R+28.35\ E$.

The outer street line, not changed by the widening, is a single circular curve tangent at its ends to the street, while the inner street line is a compound circular curve made up of a central

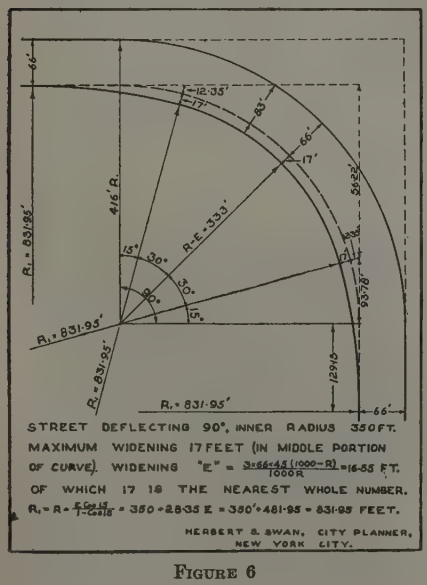

FIGURE 6

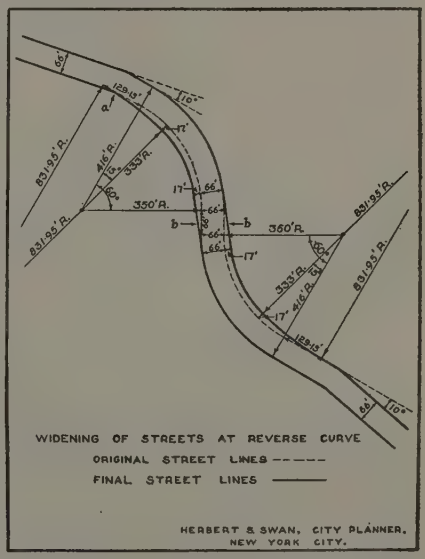

FIGURE 7

circular curve and two identical circular curves of larger radius connecting the street to the central curve. These end-curves or curves of adjustment are tangent both to the central curve and to the street lines at the ends of the curve. The end tangent points, however, are beyond the original curve so that the widening begins on the straight portion of the street before the original curve is reached.

Should the end tangent of the inside line of the curve be too short for the adjustment curve to meet it an adjustment curve should be laid out to fit the prolongation of such end tangent but

the arc of the adjustment curve as a street boundary line should terminate at its intersection with the side line of the street (Fig. 7).

Streets defined by two or more curves, whether curving in the same or in a reversed direction, immediately following each other or connected by lines too short to serve as tangents to the adjustment curves should be widened out according to the formula. When two or more curves turn in the same direction the inside curves after widening connected by a tangent common to both curves define the inside street line. When the curves defining the side lines of the street reverse in direction, the curves on each side of the street after widening according to the formula should be connected by a common tangent. The curves on each side of the street with their connecting tangents define the widened street lines (Fig. 7).

12. *Alleys*

Alleys or public rights-of-way may be laid in the rear of lots fronting on adjoining streets when the depth of such lots does not exceed 120 feet. The minimum width of alleys shall not be less than 16 feet. The maximum width of alleys shall not exceed 20 feet.

Without entering into a discussion of the merits or demerits of alleys, it is safe to say that where alleys are laid out, they should be laid out in a manner to make it certain that they will always remain alleys. Surely, alleys should not be permitted in the rear of lots that are 200 to 250 feet in depth; if alleys are so located, the lot will almost inevitably become a street upon which houses will front. Lots of this depth are in time very likely to prove uneconomical. With rising land values they are apt to be subdivided into two lots, the front half fronting upon the street and the rear half upon the alley. To safeguard against this condition, alleys should be limited to blocks in which the original lot depth is so shallow that it is practically certain that the lot will never be cut into two lots.

Alleys permit service to and from a house without encumbering its front. Pipes, poles and wires may be located in the alleys. This saves the streets from disfigurement. It also saves them from being torn up in making repairs to service mains.

Alleys should not be used as streets,—this is not their purpose. To prevent such use they should not be laid out when a street is needed, say, when the lot depth exceeds 120 feet, nor should they be of sufficient width for street use. Their width is therefore limited.

13. *Easements in Rear of Lots*

Where alleys in the rear of lots are not provided, an easement of a minimum width of 5 feet may be dedicated on the rear line of each lot for the use of public utilities, poles, pipes, and conduits, except where the planning commission deems such easements impracticable or undesirable. Wherever possible, these easements should be continuous to the streets at the end of the block to connect up with the adjoining blocks in the shortest direct line.

In most cities without alleys all of the public utilities are placed within the street. An easement located at the rear of lots would make it possible to get rid of the perpetual nuisance caused by the incessant tearing up of streets for public utility connections. To-day a new pavement is hardly laid down before the street is torn up for the installation of additional gas, sewer, water, or other public service connections to abutting premises. With a 10-foot easement through the center of the block, 5 feet on the rear of each lot, the community would be able to supply all public utilities through the back yards of houses. This would remove all telephone poles and electric wires from the street front. The appearance of streets would be enhanced; the life of street pavements would be almost doubled; and travel through the streets would be made both safer and pleasanter.

Poles of public utility corporations disfigure residential streets. They are frequently a blemish to an otherwise attractive community. They pre-empt the space that should be occupied by street trees. Where poles and trees are on the same street, the trees are sure to suffer.

The residents must have the service of the public utility companies, yet it is barbaric to plant telephone poles where trees should be.

The object of this easement is to provide in the rear of the lot a place for public utility poles, as well as a location for water, sewer and gas pipes where connections can be made and repairs effected without tearing up the street pavement.

To be of value the easement, of course, must be continuous through each block. It should also connect directly into similar easements in adjacent blocks.

14. *Grades*

Grades shall, so far as practicable, not exceed five per cent nor be less than one-half of one per cent, and shall not change more abruptly than by a vertical curve of 1,000 feet radius. A vertical curve of not less than this radius should connect all grades.

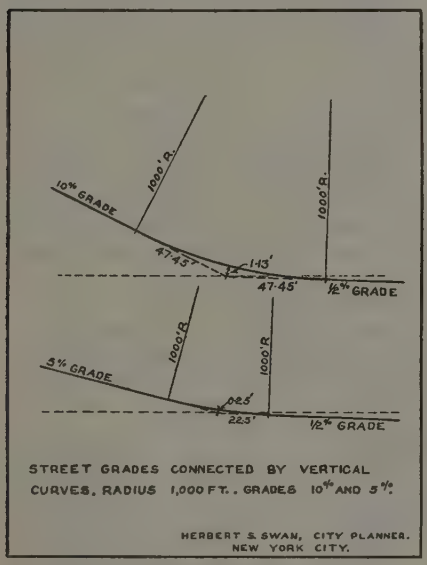

FIGURE 8

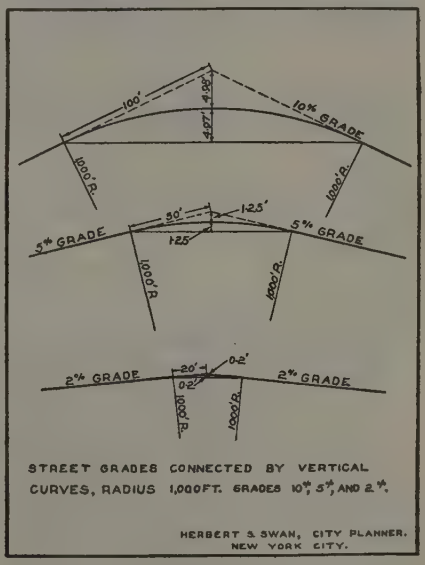

FIGURE 9

Adequate provision for draining all streets must be made and incorporated in the plans.

The limitation of street grades to five per cent has been the standard practice for many years. The advent of the motor vehicle has not caused any change in desirable street grades. Nearly all motor vehicles can negotiate a five per cent grade in high gear when the grade is not too long. Heavy loads can also be transported over such grades without undue inconvenience.

Grades should not exceed five per cent on streets of considerable traffic value, except in rough country where economy of construction demands steeper inclination. The alignment of a street can, however, usually be so adjusted that a maximum grade of five per cent can be fitted to the ground without excessive cost of construction. In the case of residence streets of no present or prospective traffic value, a greater limit than five per cent may properly be permitted when necessary to avoid heavy cuts and fills, which in addition to their expense might disfigure the property. But here, too, a grade greater than five per cent is a disadvantage and can usually be avoided by fitting the alignment to the ground.

Proper drainage is an important consideration in the maintenance of a roadway. To remove the water that falls on a roadway promptly, the longitudinal grade should seldom be less than one-half of one per cent.

Grades should not change too abruptly. Sudden changes in grade cause discomfort to passengers when riding in the higher speeds. Vertical curves in street grades are vastly more important now than they were in the days of horse-drawn vehicles. This is due to the greater speed of motor cars. Formerly such curves were desirable mainly on account of the appearance of the streets.

With the automobile we are tending toward railroad conditions in our highway construction.

All railroads take great care to connect relatively slight grades by vertical curves of long radii, in order to secure smooth operation. Vertical curves are quite as necessary on our streets and highways to secure smooth motor car operation as they are on the railroads for smooth railroad operation.

A vertical curve of greater radius is needed more on a fast traffic street than on a slow traffic street. The radius employed on a speedway or on a street for fast moving vehicles should for equal riding comfort be greater than that on a street given over to slow moving traffic, since the shock due to an abrupt change of grade increases as the

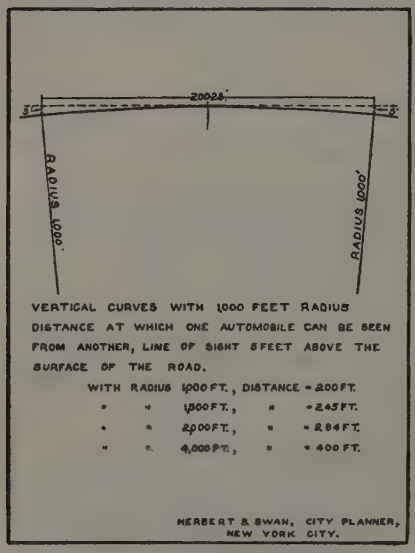
200 FT.
5'
5'
RADIUS 1000'
RADIUS 1000'
VERTICAL CURVES WITH 1000 FEET RADIUS
DISTANCE AT WHICH ONE AUTOMOBILE CAN BE SEEN FROM ANOTHER, LINE OF SIGHT 5 FEET ABOVE THE SURFACE OF THE ROAD.
WITH RADIUS 1000 FT., DISTANCE = 200 FT.
" " 1500 FT., " = 245 FT.
" " 2000 FT., " = 284 FT.
" " 4,000 FT., " = 400 FT.
HERBERT S. SWAN, CITY PLANNER, NEW YORK CITY.

FIGURE 10

square of the speed. In no case, however, should the curve connecting grades have a radius of less than 1,000 feet (Figs. 8 and 9). Where grades are moderate and fast traffic considerable, a greater radius is desirable. Two thousand or even four thousand feet radii may properly be used in many cases. The above diagrams would then be applicable for the given grades by multiplying the linear dimensions by 2 in the former and by 4 in the latter case.

There is a distinct relationship between the use of vertical curves in highway construction and the safety of highway operation. Abrupt changes in grade over hill tops create a distinct collision hazard in that they reduce the view of approaching traffic to a point short of the safe breaking distance of either car (Fig. 10).

Drivers of cars going over a hill can see each other at a point 5 feet above the street surface for different radii of curvature for the following distances:

Radius	*Distance Visible*
1,000 feet	200 feet
1,500 "	245 "
2,000 "	284 "
4,000 "	400 "

Drivers should be able to see approaching traffic and obstructions in their path for a distance of at least 200 feet ahead. No curvature over hill tops in excess of that due to a radius of 1,000 feet should, therefore, be tolerated. Traveling will be reasonably smooth when the grade does not change more rapidly than by a vertical curve of 1,000 feet radius. Such a curve will, moreover, as a rule, result in a line of vision at least equal to the safe breaking distance of two cars approaching one another at ordinary speeds.

15. *Size of Lots*

All lots shall in the respective zones possess a minimum width and area as follows:

	Width	*Area*
Zone A	75 ft.	7,500 sq. ft.
" B	50 "	5,000 " "
" C	40 "	4,000 " "
Business	25 "	2,500 " "
Industrial	25 "	2,500 " "

The size of the lot is quite as germane to the public health, safety and general welfare of the community as the size of rooms or the size of courts and yards. Instances have been known where lots have been laid out as narrow as 12 and 13 feet. Of course, such lots are so small that they cannot be improved singly with sufficient open space about the building. Such lots place a premium upon the construction of long, narrow houses, obtaining their light and air solely from either end of the house, with a series of dark and unhealthy rooms in between. As the community is limited in prescribing adequate court and yard provisions by the prevailing size of lots, the only way to secure wholesome building conditions is to anticipate the building

regulations by going back to the time when the lot is laid out, so that sufficient size will be assured the lot to admit of the erection of well-lighted and well-ventilated buildings surrounded with adequate yard space.

A minimum width and area of lot is established for each building zone into which the city is divided. The different kinds of buildings contemplated in the different zones necessitate different widths and areas of lots. The requirement for each zone is the least width and area of lot suitable for that zone.

This rule is necessary in order to make the zoning regulations of the city fully effective. New buildings of the character contemplated for a given zone cannot be put up unless the lots are laid out of a size appropriate for the desired buildings.

16. *Side Lines of Lots*

Side lines of lots, so far as practicable, shall be either at right angles or radial to street lines. Variations from this rule will be governed by the planning commission and will only be accepted where it would be practically impossible to do otherwise.

A quite common mistake made in the subdivision of lots, especially on radial streets, is to lay out the lot lines obliquely to the street line. Lot lines running obliquely to the street line mean either trapezoidal buildings or a saw-tooth building line in front of the buildings. Buildings are usually rectangular in shape. Any considerable departure from rectangularity in construction means increased expense, inferior and ill-shaped rooms and waste building space.

When the lot lines are not perpendicular to the street line, a uniform building line of the houses on the street becomes almost impossible. Each successive house on the street projects in a step-like fashion just a little further than its neighbor. A saw-tooth building line along a street involves a distinct decrease in the light, air, view and dignified appearance of all the buildings throughout the street.

In other words, every house is robbed of one-half its light, air, and view from the street. Needless to say, such saw-tooth building lines depress realty values along the entire length of a street. It also results in waste of land. Lots, the side lines of which are either at right angles or radial to the street line facilitate the erection of the most satisfactory and economical buildings at the same time that they encourage the most effective utilization of the land.

17. *Lot Depths*

The depths of lots shall generally be not less than 100 feet nor more than 150 feet.

A certain relationship exists, of course, between the width and the depth of a lot; if the lot is lacking in desirable width, the deficiency must be made up in an increased length; if the lot lacks appropriate length, this defect may in part be compensated through increasing its width. Yet for any particular type of development there is a very definite economic limitation upon both width and length. For all ordinary residential developments the economic lot length varies between 100 and 150 feet.

The deep lot gives rise to an entirely different kind of evil than that caused by the too narrow lot. A lot depth of from 150 to 200 feet frequently serves the purpose of the original subdivision, especially when the land is developed with expensive homes. But when land values rise and the land becomes too valuable for occupancy by expensive homes, there is an increasing pressure on the owners to utilize their large lot holdings more intensively. In such instances rear houses are frequently built. In other instances owners are inclined to utilize their rear land through the opening up of blind streets. In either event, the deep lot is accompanied with social consequences that are highly undesirable. It is of the utmost importance to the permanent well-being of the community that both the width and length of lots be controlled with reference to what is likely to develop in the light of changing conditions over a long period of time.

18. *Reserve Strips*

No subdivision showing reserve strips of land which will prove untaxable for special improvements will be approved, except when the control and disposal of the land comprising such strips are definitely placed within the town's jurisdiction subject to conditions approved by the planning commission.

Reserve strips have the same pernicious effect as failure to lay out streets to the property line. It enables the owner of the reserve strip to prevent streets or other improvements crossing this strip, no matter how badly they may be needed, unless the city steps in and uses its power of eminent domain to take the strip. Holding out reserve strips is usually practiced in order to retain some control which should be surrendered to the lot owners upon the sale of the property.

19. *Final Plans*

All final or record subdivision plans must be approved by the planning commission before filing with the county clerk. These plans shall contain complete data regarding the facts required in the following:

(a) *Scale.* All final or record subdivision plans shall be drawn upon tracing cloth in sheets 24 inches wide by 36 inches long and to a scale of 50 feet to an inch, except with the permission of the planning commission; provided that when more than one sheet is required, an index sheet 24 inches wide by 36 inches long shall be filed showing the entire subdivision on the one sheet with block and lot numbers.

Final plans are to be on sheets 24 inches by 36 inches. A scale of 50 feet to the inch is required. This scale will permit showing the street and lot arrangement in full detail. It is the scale usually adopted by towns and cities for tax maps. Final maps to this scale on tracing cloth enable cheap and satisfactory copies to be produced by mechanical processes. They also make suitable tax maps immediately available. An index with block and lot numbers is, of course, necessary in order that the entrie subdivision may be taken in at a glance and that the relationship of the streets and lots on different streets to the whole area may be more clearly comprehended.

(b) *Required Measurements.* The length of all straight lines, deflection angles, radii, arcs and central angles of all curves shall be given along the property line of each street. All dimensions along the lines of each lot with the angles of intersection which they make with each other shall also be given. Where it would be more convenient, bearings may be used instead of angles. Where a street is not continued straight across an intersecting street into the next block, the connection across such street shall be given by the proper measurements.

Data should be given on the map sufficient to locate the property, streets and subdivided lots from two monuments or known angle points. It is intended that this public record shall be in sufficient detail for the re-establishment of lines without recourse to the private notes of the surveyor who originally laid out the tract. The length of all lines and the dimensions of all angles and the radii and length of all curves both along streets and lots are therefore required. To enable a street to be fully located across intersecting streets as well as to tie one block to another, the street connections across an intersecting street are to be given wherever necessary for complete location.

(c) *Reference Points.* All dimensions, angles, bearings, etc., given on the map must be referred to at least two permanent monuments not less than 300 feet apart, which would be indicated on the map.

A survey without monuments or known points is of no value. One could not tell from the map where the property is. Monuments or their equivalent are therefore essential and the more substantial and permanent they are the better. From one monument a measurement can be made but it takes two monuments to define a direction. Two at least are necessary, together with the data listed in the above paragraph completely to locate the subdivision. Direction cannot be defined with precision unless the monuments are some distance apart. This distance should be not less than 300 feet for city work. In addition to the minimum number of monuments necessary to define the work, many more should be placed, preferably at block corners, angle points and points of curve, so that the lines can be readily found and the lots easily surveyed. With a considerable number of monuments the displacement or loss of one or two monuments will have no serious consequences.

as a doubtful or lost monument can be checked up or replaced from the others.

(d) *Adjoining Subdivisions.* The names of all adjoining subdivisions, the side lines of abutting lots and lot and block numbers or if not a subdivision the names of the property owners shall be given. Show also the map numbers as recorded in the county clerk's office.

Map numbers are necessary in order that the property may be readily identified in the records. The names of adjoining subdivisions and of property owners are also necessary in order that the maps and records concerning these subdivisions may be readily found. Side lines of lots, and lot and block numbers of abutting lots are needed to aid in maintaining regularity of the lot lines in adjoining subdivision.

(e) *Elevations.* The elevation of all streets at the center of each intersection and at each change of grade point must be given and located by distance from nearest street intersection. All elevations must be referred to some permanent bench mark, which must be described on the map. Where practicable, city datum is to be used.

The final maps should be a complete record on which all essential information as to grades as well as the lines of streets should be given. The rules have already provided for a complete description of the street lines; they now provide for an equally definite description of grades. This is done by giving the elevation referred to a known datum at each change of grade point in the street as well as its location referred to the street intersection.

(f) *Title and North Point.* All final or record subdivision plans shall bear a title which shall include the name of the subdivision. A north point shall be shown which may be magnetic or true north.

Subdivisions in some cities are commonly referred to by a name, which the title should bear as a matter of convenience and custom. The north point should be suitably indicated on all subdivision plans so that they can be properly oriented.

20. *Blue Prints*

A blue print on cloth of all final or record subdivision plans and index sheets shall be furnished the planning commission for its file. These prints shall be upon sheets 24 inches wide by 36 inches long.

It is necessary that the planning commission should have a complete set of record plans, which it has approved in its files for ready reference. Otherwise, the commission would be greatly handicapped in its work. These blue prints shall be on sheets 24 inches wide by 36 inches long, for the sake of uniformity. These prints can be readily reproduced from the record tracings at small expense and are facsimiles of the originals.

21. *Monuments*

Monuments shall be placed at all block corners, at angle points and the points of curve in streets and at such intermediate points as may be necessary. The location of all monuments shall be indicated on the final or record subdivision plan.

It is necessary to place monuments at corners, angles, etc., so that the correct lines of streets and properties can readily be found at any time without delay of undue expense for surveys.

Monuments should be shown on the maps not only to indicate to the searcher where a monument may be found and its relation to the street and property lines but also to indicate its authoritative character in defining the lines of the subdivision.

22. *Grading of Streets*

All streets shall, before the planning commission accords its final approval to the subdivision, be graded to their full width by the subdivider.

The proper time to grade a street is when it is first laid out. Where land is improved before the street is brought to a proper grade there is every temptation on the part of the builder to construct his house to the existing grade of the street.

The result is that the existing grade tends to become the permanent grade of the street, for, once houses are erected at a particular grade, the grade cannot be changed without damage to buildings.

Where a street is brought to grade upon the original subdivision of the land, every lot purchaser will, of course, erect his house to the street grade, thus bringing about the development of the lots in harmony with the development of the street. Owners will, under such circumstances, make due allowance for differences in the elevation of streets and lots, so that their lots will be properly drained and their houses built above the street grade.

There may be instances where it is impracticable to insist upon the grading of an entire tract at one time. Under such circumstances, the planning commission may divide the area into different units,—units within which it is desirable to grade streets immediately and units within which it is temporarily desirable to defer grading. Where such conditions prevail the planning commission would give its final approval only to the part of the subdivision actually graded. The subdivider would be limited to selling lots strictly to that part of the subdivision which had been approved by the planning commission. A plan would be developed for the entire tract, but the planning commission would approve only the graded part of the tract. The approval for the other part of the tract would be held in abeyance until the subdivider graded the streets.

23. *Public Utilities*

No street that has not been approved by the planning commission shall be accepted and maintained by the city, nor shall any public utility such as water, sewer, street light, or police be extended to or connected with a tract unless its subdivision has first been approved by the planning commission.

This provision serves notice upon all subdividers that they need expect no co-operation on the part of the community in its development, unless they, in the original subdivision, consider the permanent interests of the community.

Under these circumstances, it may be expected that owners will, as a matter of their own self-protection, prefer to lay out their land in accordance with, rather than contrary to, the wishes of the public authorities.